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Clinical Lecture.

CONSUMPTION.

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[Reported by William Whitford, M.D.]

Gentlemen:—We have to-day a group of cases which exhibits the various manifestations of consumption. It is a disease that assumes varied forms. The case before you is one of incipient phthisis, and we commence with him first simply because we desire to make a few remarks with reference to the diagnosis of these cases in their various stages. In the first place, I will state that when you examine a patient, suspecting lung trouble, there are certain precautions which you must observe, to prevent an error in diagnosis. For instance, you must remember this fact, that you will not hear the expiratory sound in all cases. It is only in about three-fourths of the cases that you can hear any expiratory sound. Another point is the relation in the length of time between inspiration and expiration, which varies in different patients. Expiration is usually one-fifth as long as inspiration. You find, sometimes, cases in which the expiratory sound is one-third to one-fourth as long as the inspiratory sound. Now, as a matter of fact, expiration is really four-fifths as long as inspiration, because it takes nearly as long to expel the air from the air-cells as it does to fill them. But there is a great difference between inspiration and expiration as regards the length of time these acts occupy, so far as your sense of hearing is concerned; consequently when you listen over the chest you will find you can generally hear inspiration quite readily, while expiration is not so readily heard, and does not occupy the whole length of time during which the air is passing out of the lungs. If we represent by figures the length of time which inspiration and expiration occupy, as well as the period of rest, they would stand in about this ratio: Inspiration occupies five-tenths of the time; expiration about four-tenths of the time, and then there is a pause between expiration and inspiration, which is the period of rest, occupying about one-tenth of the time. But on auscultation these figures would be changed, as expiration would appear to be three or four times longer than inspiration. And you must remember that patients do not follow test figures. You may meet persons who have sound lungs and the expiratory sound is nearly as long as the inspiratory. Therefore, do not be too ready to base a diagnosis of there being pulmonary disease present when there is prolonged expiration.

There is another point, and that is to determine the *quality* of the expiratory and inspiratory sounds. The inspiratory sound is a soft, breezy, low-pitched sound. When you listen over the chest and hear it, it gives you the idea of a soft current of wind passing through the chest. On the other hand, you are taught that the expiratory sound is higher in pitch. By some authorities it is claimed to be lower in pitch. If you will listen carefully over a healthy chest you will find that the difference between the expiratory sound and the inspiratory sound is this: The inspiratory sound is soft, breezy or vesicular in quality, and low-pitched, while the expiratory sound has less vesicular quality, is more like a blowing sound, with a lower pitch. Whenever you find a case in which the expiratory sound is longer than the inspiratory, and its pitch is high, and its quality blowing, you may be certain it is due to consolidation of lung tissue.

There is one point I wish to mention, and one that is not often referred to, and yet you would learn it yourselves by practice, and that is the presence of a sound from a peculiar muscular vibration which takes place, especially during inspiration, in the muscles of the chest wall. This sound is termed muscular susurrus, a word which indicates the vibratory sound. This sound approximates somewhat in character the inspiratory sound. It is a soft, low-pitched, wavy sound, and listening over the chest wall in patients who take a full breath or exert themselves, you may be inclined to think you hear the inspiratory sound and may mistake it for the respiratory sound, and may think it evidence of a healthy lung, when in reality broncho-vesicular breathing may be present. The way to prevent that is to have your patient breathe easily, or do not let him take full breaths, so that you may be able to hear the respiratory sound without this muscular vibration. You may also prevent it to a certain extent by placing the muscles in a state of relaxation. The ordinary direction in examining the chest is for the patient to place the muscles of the region being examined in a state of tension; for instance, if you are listening over the anterior portion of the chest, have the patient place his hands behind his back. By so doing you get a more pronounced susurrus. In case you get this sound simply have your patient place himself in some other position, so as to put the muscles in a state of relaxation.

This patient, a male, aged 22, an Italian, and a laborer, has been ailing one year. He says he has had a hacking cough, has lost flesh, at intervals has night-sweats, and sometimes is feverish.

The physical signs in this case are flattening of chest at the right apex, loss of motion on the right side, dulness to a slight degree, and increased vocal fremitus over the right infra-clavicular region, with broncho-vesicular respiration. This is a well-marked case of pulmonary tuberculosis in the first stage.

The physical signs you obtain in the first stage of phthisis depend much upon the amount of consolidation of the lung. If there be a limited amount, and the disease is of short duration, there would be very little difference in the conformation of the chest walls; but if the disease has been of quite long standing, and the amount of consolidation is considerable, there is consequently a retraction of the lung tissue, and as a result of that the deprived air-cells become collapsed and that characteristic flattening at the upper part of the apex occurs. Associated with this flattening there is loss of motion because that portion of the lung does not expand fully.

However, you may meet cases in which you get none of these signs, and yet you can, in the majority of such cases, make a diagnosis in the following manner: supposing in this case the only physical sign present was mucous râles over a limited area only on one side; in the absence of injury of any kind to the lung producing localized bronchitis, such as introduction of irritants into the bronchial tubes, you can almost certainly say that the case is one of incipient consumption; and thus a diagnosis could be made before the ordinary physical signs had appeared, and at a time when you could most advantageously place your patient under the proper treatment. I believe there is truth in the statement by Buhl, that bronchial walls often become inflamed, and that this is accompanied by parenchymatous pneumonia in a limited area. Such a condition of the lung tissue would give rise to such signs as I have often noticed in cases which eventuate in consumption of the lungs. This sign is, therefore, a very important one, since it enables us to forecast the future, and being forewarned we can be forearmed therapeutically.

A Case of Acute Phthisis.

This second patient presents the disease in a more advanced form. The patient, a man, is 19 years of age, and was admitted to the hospital February 2, 1888. On admission his pulse was 124; temperature 103°; respirations 30. This morning, February 3, at 3 A.M. his pulse was 124; temperature, 104.2°; respiration, 32. Family history good. As to his personal habits, he drinks moderately. He had pneumonia eleven years ago, but otherwise has been in good health until the commencement of this illness. Present trouble commenced with a severe chill about a month ago, the chill lasting about eight hours, and being followed by a severe headache, cough, dyspnœa and pain in the chest; no blood in the sputum, which has always been yellowish-white and frothy. Bowels have been constipated; has had night-sweats from the commencement of the disease; little or no appetite. On admission, patient appeared emaciated; face was florid; tongue was clean, but flabby; skin dry.

Gentlemen, you will notice that dyspnœa is severe and that cyanosis is appearing, the lips and face being bluish. His tongue has a raw appearance, indicating great debility and fever.

This case exhibits a form of the disease in which the deposit is undoubtedly miliary tubercle, and from the rapidity and shallowness of the respirations both lungs must be thickly studded with them. There is no loss of motion, no dulness on percussion, no bronchial breathing, nor, in fact, any of the signs which indicate consolidation of the lung; but listening over the chest we hear fine subcrepitant râles, with puerile respiration. What does that indicate? It indicates that the bronchial tubes, especially the smaller ones, are inflamed. Then on both sides we can find in two or three different places small friction sounds. What do they indicate? They indicate that miliary deposit has taken place beneath the pleuræ. You notice, furthermore, that the patient complains of having pain in the abdomen. I have no doubt there is also, a deposit of miliary tubercle in the peritoneum. Breathing over both lungs is harsher than normal, shallow and frequent. All these physical signs point to the fact that there is a miliary tubercular deposit throughout the whole lung tissue, involving the pleura, and perhaps the peritoneum, or the serous coats of the intestines.

In this case the symptoms are a high temperature, a rapid pulse, and frequent respirations. The patient has lost flesh rapidly. The history of this case will undoubtedly be this: That the high temperature will continue, no matter what course of treatment may be instituted, and the case will continue to be one of progressive emaciation and exhaustion, finally terminating fatally.*

The method of making a diagnosis between cases of acute phthisis and phthisis due to gray tubercle is very different. In a case of consolidation of the lung, or what is known as "old-fashioned consumption," you make your diagnosis by well-marked physical signs; whereas in a case of miliary tubercle of the lung you make it more from the symptoms than from physical signs.

Phthisis Complicated with Tubercular Laryngitis.

Our next patient was admitted to the hospital February 2, 1888. He had bronchial trouble some years ago. Last year he suffered from mercurialism, mercury having been given him for specific trouble, whence he dates the active onset of his present illness. He became hoarse; at times breathing would be labored, and deglutition painful; sometimes only fluids could be taken. He has a dry cough; no expectoration; has lost much flesh; has nocturnal seminal emissions, diarrhoea, and lately night-sweats. The character of his cough is hoarse and laryngeal, while his voice has almost failed, he not being able to speak above a whisper. On laryngoscopic examination we see there is ulceration of both vocal chords, extending to the anytenoid cartilages. This accounts for the character of the cough. We may get the same kind of a cough in paralysis of one or both vocal chords of the larynx, in cases of ulceration, loss of tissue of the vocal chords, or interference with the action of the muscles of the larynx.

The lesion which exists in the lung in this case is in the form of a cavity in the right apex. The characteristic physical sign is cavernous breathing, which is present in this case in a typical form.

By the way, I should have remarked that his occupation has been that of theatrical singer, and the fact of using his voice every night, and perhaps during the day, and also being exposed to draughts, combined with the ptyalism, no doubt inflamed the latent tubercles, and hastened the full development of the disease.

When ulceration of the vocal chords occurs deglutition is painful and exceedingly difficult. It is more difficult to swallow dry than soft articles of food, and the patient finds it harder to swallow liquids than soft mush, or food of a similar nature; consequently in our treatment we have to order bread soaked in milk, or pudding, or some article of food that has a like consistency.

I read an article in a medical journal some time ago (referring to cases of laryngitis, or ulceration of the larynx, in which patients had difficulty in swallowing) to the effect that the difficulty of swallowing could be obviated by having the patient drink out of a bowl with the head lower than the body. I tried that in the case of a young lady with tubercular laryngitis, and it was a success. I simply had her lean over the edge of the bed, and had her swallow with the head lower than the body, and the result was she could swallow liquids quite readily in that manner. The explanation of it is supposed to be some peculiar action of the muscles and the force of gravity in aiding the closure of the epiglottis.

Cases of tuberculous laryngitis you will meet frequently when you go out to practice; and the question arises, what treatment can we institute for them? I presume there is no subject which has been more written upon by specialists than the treatment of tubercular

*A few days later this patient died, and the miliary deposit was found in the lungs, kidneys, liver, and in all the serous membranes.

laryngitis, and in which the results have been less fruitful in obtaining a treatment that is successful in curing the disease. The only thing we can attempt to do is to institute such treatment as will render the patient as comfortable as possible; and that comfort consists in the first place, in relieving the cough. This you can do by the internal administration of opiates or anodynes, remembering that too much of the opiates will cause dryness of the throat, and that itself is a source of irritation and discomfort to the patient. In the second place, constitutional treatment must be re-enforced by local treatment. The larynx should be cleansed thoroughly every day; oftener than that, if necessary, and at the same time some antiseptic remedy applied—as iodoform, for example—which is indicated, and recommended perhaps more than any other remedy in these cases. To relieve the pain in deglutition, we may apply a five or ten per cent. solution of cocaine shortly before eating. Krause, of Berlin, has extolled highly the use of lactic acid, while Rosenberg, of the same city, speaks in praise of menthol. In the third place, in certain cases, where the disease has progressed very rapidly and suffocation is imminent, the question would arise whether tracheotomy would be justifiable or not. The symptoms must be urgent, and the surgeon must be fully convinced that he will either prolong life or relieve suffering, before undertaking the operation. I do not consider it justifiable in this case at present, and we will therefore follow out simply local medication, being in readiness, however, at any time, to carry out any operative procedures that may be necessary.

A Case of Tabes Mesenterica.

J. L. was admitted January 5. Family history: One sister died of consumption. Two years ago he had an attack of rheumatism, during which time his ankles became swollen. February, 1887, his left leg was amputated on account of tuberculosis of the ankle-joint; he left the hospital in March of the same year, and has not regained his former health. He coughs a good deal, the sputum being of a yellowish color; the lower extremities become œdematous at times; the abdomen enlarges; micturation becomes more frequent; and at short intervals the patient suffers from diarrhœa. When first admitted into the hospital there was enlargement of the abdomen, a good deal of tenderness and diarrhœa at times; and while we are not able to find any tubercular trouble of the lungs, yet at the same time he is progressively emaciating, and the enlargment of the abdomen is increasing. We have no indication of the presence of dropsy. Making deep pressure through the abdominal walls, we can feel what seems to be enlargement of the mesenteric glands. It is one of those cases in which there was primary tubercular trouble of the ankle-joint, for which amputation was performed, and the tubercular disease has now appeared in the mesenteric glands. He has continuous fever, with progressive emaciation.

On the 9th, four days after admission, his temperature was 103.2°; morning of the 11th, 99°; evening, 100.8°. His temperature then remained about 99° or 99.8° until the 22d, when it rose to 100°. On the 25th, afternoon temperature was 100.8°, showing, of course, excessive waste of tissue. The prognosis is unfavorable. The case is an illustration of the manner in which tubercular disease may manifest itself.

COMMUNICATIONS.

TYPHO-MALARIAL FEVER, AND QUININE.

BY JAMES W. PRICE, M.D.,
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For forty years, and most of that period engaged in active practice, I have been a close observer of the various diseases incident to the climate in which I have lived. I speak of the different forms of fever, and from an honest standpoint, I have long since come to the conclusion that they have not changed in grade or symptoms for a century. Typhoid, remittent, intermittent, and inflammatory types are exactly what they were one hundred years ago. Professional views, however, have undergone a wonderful development, and this has resulted in various experiments, not all of which have been to the advantage of the patients; and it is a serious question, whether or not diseases are cured with any greater success than they were in the days of our fathers? This interrogation may arouse the young men of the profession; but, we who have been long in service, and have fought many battles in the professional field, are not so apt to be entrapped by new names of diseases, or the numberless modern therapeutical agents.

I reside in a region where malaria is prevalent, and frightens many people into imaginary paroxysms of so-called typho-malarial fever. This is a form of fever which I should name inflammatory remittent, but our most

progressive medical brethern here insist upon the term typho-malarial. In regards to this, Prof. I. G. Jones, says: "Malaria is a generic term; typho-malaria is a misnomer. Both are calculated to mislead novices, and even old practitioners; therefore, I propose the good old term remittent. If we claim that it is due to miasm, we only plead our ignorance of its causes, as we do not know what malaria is." The term typho-malarial fever is of modern origin. Dr. J. H. Egan states that this title was given to the fever contracted by the U.S. troops in the Chickahominy swamp while investing Richmond. Dr. Woodard, who gave it the name, recanted his position, and regretted that an error should have gone uncorrected for ten years.

Alfred Stillé, Professor of Theory and Practice of Medicine, says: "Remittent or bilious fever, called lake, marsh, or jungle fever, is of all degrees of gravity. The course is made up of a series of paroxysms and remissions, with no intermediate periods of health; the paroxysms may be short, may be long, or almost continuous. Symptoms abate, but do not cease. If the fever tends to recovery, it changes to intermittent; if it tends to death, the patient sinks into the typhoid state. The typhoid state of malaria has been absurdly called typho-malarial fever."

The treatment of so-called typho-malarial fever is almost entirely confined in this country to the indiscriminate administration of quinine, not unfrequently in enormous doses. This error has grown out of the assumption that the disease is of malarial origin. All the cases which terminated fatally, have exhibited hyperemia of the brain, which in in my opinion, was the direct effect of quinine, and not due to the disease itself.

Dr. Atkinson, says: "The use of quinine in full doses in this fever is apt to produce torpor and congestion, attended with a slow pulse, profuse perspiration, inanimation, and a world of trouble to the doctor and danger to the patient."

H. G. Magee, M.D., says: "This fever is not influenced by quinine, so we must come to the conclusion that the name of typho-malarial fever is a misnomer."

Dr. Usher: "Like Dr. Thompson, I have had very poor success when I used and relied on quinine; it seemed to aggravate the case."

Prof. Binz, holds the theory that quinine reduces the temperature by weakening the power of the zymotic poison. He does not deny that quinine may kill by paralyzing the heart.

Peacock of London, and Niemeyer, have both given up the use of large doses of quinine. Quinine in large doses is unnecessary, useless, and often dangerous.

Benj. Edeson, M.D., says: "For some years physicians have been *quinine mad*, affected with what may be termed *cinchoniphobia*. The practice seems to have been, when in doubt, give quinine; give quinine any way. So the people have been dosed with it, and have been educated up to the belief that it is good for every ailment. So the public order it in pills, powders, tablets, and triturates, just as they do their potatoes and flour, and take it without a prescription, but with the *quasi* endorsement of the doctor that should it do no good, it would do no harm."

I cannot close this article without calling attention to the danger of indiscriminate administration of quinine to children, under the impression that it is a harmless agent. It will impoverish the blood by destroying its coloring matter. It is destructive to the nervous system by its powerful impression made upon the brain. Children will become sallow, anæmic, and predisposed to dropsical effusion which will end in premature death.

APEX EXPANSION VERSUS PURE AIR IN PULMONARY CONSUMPTION.[1]

BY THOMAS J. MAYS, M.D.,

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Next to the tubercle bacillus, impure air stands most prominent among the many agencies which have been assigned as the causes of pulmonary consumption. Innumerable plans and methods have been devised and proposed for improving the ventilation of our dwellings, hospitals, and workshops; volumes upon volumes have been written on the ill effects of breathing vitiated air; and the immaculate freshness of the country and mountain air has come to be universally regarded as a certain guarantee against pulmonary consumption. These, like many other popular notions, contain a germ of truth, but actually are delusive, inasmuch as they exaggerate the effects of a small evil, and afford a false sense of security against the real source of danger in the production of this disease. This we shall endeavor to show in the following pages.

At the very outset we desire it to be well understood that we do not in the least underrate the value of fresh, wholesome air in the prevention and treatment of pulmonary con-

[1] Read at the Meeting of the Philadelphia County Medical Society, February 22, 1888.

sumption, and while it is probably true that on the whole country people enjoy greater immunity from this disease than city people —though this is not proven on account of a lack of adequate statistics—yet we are convinced that the purity of the atmosphere plays a very small part in bringing about this probable result. If we are permitted to make a homely, hypothetical proposition, we will state that if two individuals who respire the same quantity of air, and who are equally well off so far as heredity, food, clothing, warmth, comfort, etc., are concerned, were both enjoined to maintain a sedentary and a stooped position of their bodies for an unlimited period, one inside of a house and the other outside in the open air, we have no reason for believing that the one inside will fall a victim to this disease sooner than the one on the outside. If it were true that this disease is the result of breathing a vitiated and impure atmosphere, how can we account for the fact that the inhabitants of Iceland, Greenland, Lapland and of other cold countries of the north, who live in dwellings which are notoriously wanting in ventilation, are practically exempt from this disease? Of the Icelanders, Mr. Warford Lock,[1] who is very familiar with these people and who speaks their language, says that their life is "one long exposure to the elements, and during the night they live in dwellings devoid of ventilation, and which, if not buried beneath the earth, are built of turf and often become grass-grown. A very bad feature being the excessive stuffiness of the common living and sleeping-room, when, owing to the absence of fires, the greatest possible crowding and plugging are necessary in order to maintain a tolerable degree of warmth." And yet Dr. Cullimore,[2] from whose work the above quotation is taken, says (p. 73) "that consumption in Iceland is never indigenous, but is always, when it does occur, imported from abroad and but seldom extends to the second native generation." On the other hand, it may be stated that the people of the tropical regions of the globe who enjoy an uninterrupted revelling in pure, fresh air, both day and night, winter and summer, are by no means free from pulmonary consumption. The only difference, so far as the physical life of these two classes of people is concerned, is that the warm climate, which produces such a luxurious atmosphere, also creates a tendency to physiological sluggishness and an indisposition toward physical exertion among its inhabitants; while the people of the cold and rigorous north are compelled to maintain the warmth and vitality of their bodies in great part, by day, through physical exercise, of which their occupations of hunting, fishing, herding, etc., give them a full share. It is also well-known that miners and laborers employed in coal mines, who continually respire an atmosphere which is not only loaded with impurities, but is damp and musty, suffer but very little from this disease.

One fact which lends color to the belief that pure air is such an essential element in limiting the ravages of consumption, is that those who occupy elevated or mountainous regions are less liable to this disease than those who live near the sea level. Thus Fuchs shows from extensive data that "at Marseilles, on the seaboard, the mortality from this disease is 25 per cent.; at Oldenburgh, eighty feet above the level of the sea, it is 30 per cent.; at Hamburg, forty-eight feet above the sea, it is 23 per cent.; while at Eschevege, four hundred and ninety-six feet above the sea level, it is only 12 per cent.; and at Brotterode, eighteen hundred feet above the sea, it is but 0.9 per cent." Carrying this line of observation further, it appears very probable that consumption is almost unknown among any native people who live more than 6000 feet above the level of the sea.

Now that which concerns us here chiefly is the reason why mountain climates are, as a rule, so free from pulmonary consumption. Is it because the atmosphere is pure and free from septic germs? This is hardly possible, for if it were true that the aseptic condition of the air played any very prominent part, why should the Icelanders, who nightly reek in a most filthy atmosphere; or the dwellers along the Nile, who, according to Mr. B. Phillips, live "in huts where the pure air has neither ingress nor egress, except through a small hole near the ground;" or the coal miners, who continuously respire a foul and poisonous atmosphere, all be comparatively free from this disease? Is it due to the general absence of humidity? We think not, for Bogota, the capital of the United States of Colombia, located on the Andes, near the equator, and at an elevation of over 9000 feet, is said to be entirely exempt from this disease, although dampness prevails to quite a large extent. We think there is much reason for believing that it is principally, if not entirely, on account of the attenuated condition of the atmosphere, and shall, therefore, at once proceed to consider the physio-

[1] The Home of the Eddas. S. Low, 1879.

[2] Consumption as a Contagious Disease. Ballière, Tindal, & Cox, 1880.

logical influence of high altitudes on the human body. It is estimated by Dr. Denison that at an elevation of 6000 feet, the surface of the body is relieved of nearly 7000 pounds pressure. When such an enormous weight is lifted from the body it is quite evident that its interior must also be markedly affected—the pulse is accelerated from fifteen to twenty beats per minute; the respiration is quickened from ten to fifteen breaths per minute; evaporation from the skin and lungs is increased, and the amount of urine is diminished. These are some of the immediate effects. Protracted residence in such a high region enlarges the chest capacity. The Quichua Indians, who dwell on the elevated table lands of Peru, have enormous-sized chests, containing capacious lungs with large air cells. The Mexican Indians possess chests which are out of proportion to the sizes of the individuals. Dr. Denison says that children born in the Rocky Mountains have chests of unusually large capacity, and M. Jaccoud states that at St. Moritz the respirations are not only more frequent, but fuller.

The reason why the number of respirations increases while ascending a high elevation becomes clear when we take into consideration the fact that at the sea level a cubic foot of dry air contains about 130 grains of oxygen, while at an elevation of 6000 feet it only contains about 106 grains—nearly twenty-five per cent. less than the body is accustomed to breathe at or near the sea-board—therefore, in order to supply the wanted amount of oxygen to the body, the respirations must either increase in number or in extent. From all accounts it is very probable that respiration becomes accelerated only during the early period of exposure to such an attenuated atmosphere, and that subsequently this function becomes slow again because the air penetrates more deeply and completely into lung tissue but little utilized before.

That man does not suffer under such a deprivation of oxygen is evident from what we know to be true of his lung capacity under ordinary conditions of life. Prof. Mosso has recently proven experimentally that man possesses a lung capacity which is nearly one-fourth larger than the actual necessities of life at the sea level demand; hence by employing his whole lung capacity he can extract a sufficient amount of oxygen from this attenuated atmosphere without difficulty. And herein lies the secret why so many consumptives, and others with weak lungs, derive such a great benefit when they resort to a mountain climate. It may be trite, but it is nevertheless true, that all consumption practically begins at the lung apices, because these parts are habitually inactive. These are inactive because, in the first place, the bronchial tubes are so arranged that they conduct the air with greater facility to the base than to the apex of a lung, and, in the second place, because the lung is larger than necessary; hence the base, which is filled most readily, is filled first, and the apex, if at all, toward the end of inspiration. The apices, therefore, become the superfluous parts of the respiratory organs. It is quite different, however, when the body is immersed in a highly attenuated atmosphere. Every available space in the chest is now brought into requisition to furnish the needed amount of oxygen, the apices are called out of their lethargic state, and the alveoli are inflated, and if the infiltrated areas are not dispersed the surrounding alveoli are kept permeable, and so the disease is, at least, limited and called into abeyance.

This statement is corroborated by those who have had large experience in the climatic treatment of pulmonary consumption. Thus Ruedi reports[1] "that of 600 consumptives under his care at Davos, expansion of the thorax took place in no less than 584." Dr. Denison says[2] "the increased circumference of the chests of consumptives after undergoing the high-altitude treatment is shown in many of Prof. Weber's, as well as in my own cases." Dr. Lindsay, in the work already quoted, states (p. 32) that "Davos does not cure consumption by its sunshine, or the purity and dryness of its air (although these conditions undoubtedly co-operate in the beneficial effect) but mainly by the rarefaction of its air, which stimulates respiratory activity, promotes healthy expansion and soundness of tissue in the lungs, and hence aids them to resist the spread of morbid deposits." So much, then, for the immunity which is afforded by mountain climates; but that which is of still greater interest to us is the fact that those who follow active employment are less liable to this disease than those who pursue sedentary and quiet occupations. Thus M. Lombard found "In Paris, Geneva, Vienna and Hamburg, that there are a greater number of persons leading a sedentary life afflicted with phthisis than of those leading an active life, in the proportion of 141 to 89. In the Brompton Hospital the relative liability was

[1] Climatic Treatment of Consumption. By Dr. J. A. Lindsay, p. 62.

[2] Rocky Mountain Health Resorts, p. 85.

found to be 63 per cent. of indoor males to 30 per cent. of outdoor, and all the consumptive females followed indoor occupations. Dr. Guy found in the close workshops of a printing establishment the compositors, whose employment is sedentary, fell victims to phthisis in the proportion of 44 per cent. to 31½ per cent. of the pressmen, who, although breathing the same air, and in every other respect subject to the same habits of life, differ only in the active bodily exercise which the press imposes on them; and among the same class of operatives the deaths from the same cause did not exceed 25 per cent. in those who use exercise in the open air." (Ancell.)

There can be no doubt, too, that those of our Indians who are still allowed to obey their roaming instincts of hunting and of fishing, or to follow their vocation of farming, which a number have, owe their immunity from this disease, which we know they possess, in great part, if not entirely, to the physical exercise which they obtain in this manner; while those who are subjected to the idle and improvident reservation life die rapidly from it, principally because they are deprived of their wonted exercise. This is of special interest to us here, because it has such a direct bearing on the main point at issue. Some of the former class of Indians, like the Pimas, for example, who may be called wild, although they are agricultural in their habits, are living in half underground huts, with very little or no ventilation, yet, from all accounts, consumption is an exceedingly rare disease among them.

Thus far we have seen that, on the whole, those who occupy elevated habitations, as well as those who follow active exercise, are more exempt from the disease under consideration than those who live near the sea level, or those who live a life of quietude. In connection with this we will consider the influence of physical exercise on the lungs, and endeavor to ascertain how it affords protection against consumption. During physical exercise more oxygen is consumed by the muscles, and more blood and air circulate through the lungs than during rest. Just how much more air enters the lungs during activity than during rest can easily be estimated when it is known that during inactivity a man breathes 480 cubic inches of air per minute, and while walking at the rate of four miles per hour, or while tramping a treadmill, he breathes 2400 cubic inches, and if he walks at the rate of six miles an hour he takes in 3260 cubic inches of air per minute. The difference between 480 and 2400 cubic inches of air capacity shows that during the exercise of walking even at the rate of four miles per hour, five times more lung service is thrown into action than during rest; which proves very conclusively that bodily activity possesses a marked influence in determining the degree of lung expansion, and that under such conditions regions of lung will be called into service which are never fully reached by air during bodily rest. This is in entire accord with what practically exists. Thus Darwin[1] says that the lungs in improved breeds of cattle, which naturally take very little exercise and are domiciled much of the time, "are found to be considerably reduced in size when compared with those possessed by animals having perfect liberty," and Waldenburg[2] states that the vital lung capacity is smallest in persons who lead sedentary lives, such as professional men, students, clerks, etc., and is greatest in those who follow active outdoor occupations, such as sailors, recruits, etc. Chassagne and Dally, in their joint work on the *Influence of Gymnastics on the Development of Man*, report that at the Military School of Gymnastics of Joinville-le-Pont, out of four hundred and one individuals subjected to gymnastic exercises for five months, three hundred and seven, or seventy-six per cent., showed an increase of an average of two and one-half centimetres in the mammary circumference of the thorax. According to Dr. Abel, seventy-five per cent. of those who practice gymnastics in Germany experience an increase in the measurements of the chest. There can be no doubt that the principal reason why consumption increases with the advent of civilization is that everything in civilized life tends to produce physical inertia in our bodies. Walking is substituted by riding in carriages and in cars; manual labor is in great part replaced by machinery; active out-door labor is supplemented by quiet indoor occupations; in fact, everything which tends to produce physical activity is exchanged for a life of ease and indolence. The American Indian, as has already been stated, is known to be comparatively free from the disease in his wild state, but as soon as he acquires the habits of and customs of civilized life he becomes its victim.

In converging the two lines of reasoning which have been thus far developed in this paper, it appears that the immunity from consumption which is established by residing in

[1] Animals and Plants, vol. ii., p. 361.

[2] Pneumatische Behandlung Respr u. Circul. Krankheiten, p 119.

a mountain climate, and by practising physical exercise, is chiefly brought about in the same manner, viz., by increasing the capacity of the chest. And from a practical point of view it is of some moment to know whether the former has more weight in bringing about such restoration than the latter—or, in other words, whether those who live in high altitudes continue to enjoy this exemption if they refrain from active physical exercise and take up a sedentary occupation in such regions. From recent inquiry into this subject we are inclined to believe, at least so far as the Rocky Mountains climate is concerned, that as soon as outdoor pursuits are exchanged for sedentary indoor occupations, consumption increases in frequency. It is, therefore, quite certain that physiological exercise plays a more important part in the problem of the prevention and cure of consumption than a residence in an elevated or mountain climate, however valuable the latter may be. We have, moreover, good reason for believing that the immunity which is established through physsical exercise is more permanent in character than that which is secured through residing in a mountain climate, for it is a common observation that consumptives flourish only in high altitudes so long as they remain; a protracted stay at the sea level is always regarded as perilous. Such consequences are in perfect harmony with what one would be led to apprehend from a knowledge of the physiological factors involved in the restoration of the patient. These factors are entirely local, and their influence does not extend very far beyond their immediate dominion. This objection does not hold good in regard to physical exercise. One thing may be said, however, in favor of mountain climate which is not true of physical exercise, viz., it produces its beneficial results without conscious effort on the part of the individual; therefore, when the remedy is viewed from a standpoint of ease and comfort, and not from one of permanence, the mountain climate is to be preferred.

In discussing the influence of mountain climate it must not be overlooked that, on account of its rarefaction, it increases the circulatory and cellular activity of the body, and in this way undoubtedly aids the process of nutrition; yet even this influence cannot be denied to physical exercise, although it is brought about in a more direct and positive manner. While increased chest capacity is, therefore, the great desideratum in preventing and treating consumption, we have the strongest evidence for believing that it is not so much a question of developing the base of the lungs as it is of expanding the apices. This is well shown by the fact that the civilized female, although she has on the whole much less chest capacity than the male, yet, owing to her increased costal expansion, which has been cultivated through the protracted influence of tight lacing, she is less liable to pulmonary consumption than the male.[1]

Pulmonary gymnastics.—Such, then, are the comparative effects of mountain climate and of physical exercise in the treatment of pulmonary consumption, and it now remains to be shown how the effects of the latter can be obtained without resorting to those of the former. Reference has already been made to the fact that muscular effort increases respiratory motion, and in taking up the question of pulmonary gymnastics it is not our purpose to discuss those exercises only which have a direct influence on the chest capacity, but also those which, through the body, have an indirect influence on the pulmonary organs. In all exercises it is very important that none should be carried to the extent of decided fatigue; and that, whenever possible, the body and head should be kept erect, the shoulders thrown back and the lungs thoroughly filled with each breath; that breathing should only take place through the nose; and that sufficient food is taken during the intervals.

Bodily exercise.—The power of walking is common to most people, and its influence on the lungs, as we have seen, is very marked. It is regarded of great service even by those who exclusively advocate the utility of high altitude treatment. Dr. Brehmer, of Görbersdorf, according to Schreiber, was the first to prescribe, for consumtives, walking up a gradual ascent. A semi-daily walk of half an hour or an hour, either on the level or on a slight upgrade, is of immense advantage to the invalid. Running, dancing, skipping rope (especially when the rope is swung backward), bowling, etc., are to be highly recommended. Whatever the mode of exercise may be, it must be performed under as little compulsion as possible. One reason why the above named exercises are so conducive to health consists in the fact that the excitement which they induce is so attractive that the consciousness of muscular effort is lost.

Among the many indoor exercises the following movements are very valuable. The arms being used as levers, are swung back-

[1] **Female Dress as a Determining Factor in Pulmonary Consumption.** Thomas J. Mays: *Medical News*, Jan. 7, 1888.

ward as far as possible on a level with the shoulders during each inspiration, and brought together in front on the same level during each expiration. Or the hands are brought together above the head while inspiring, and gradually brought down alongside the body while expiring. When a deep inspiration is taken is accordance with either plan and held until the arms are gradually moved forward or downward, or even longer, the process of chest expansion is materially enhanced. Another very effective exercise is to take a deep inspiration, and during expiration only the patient, in a loud voice, will count as long as possible. A male person with a good chest capacity can count up to sixty or seventy, while in a female with ordinary lungs this power is somewhat reduced. Practice of this sort will gradually develop the chest, and the increased ability to count is a measure of improvement going on within the thorax. Many of these movements may have their effects greatly enhanced by the use of dumb-bells, chest weights, etc., which are made especially for the purpose.

Compressed and rarefied air.—The breathing of compressed and rarefied air is attracting wide attention at the present time in connection with pulmonary consumption, and is another most useful method whereby the chest capacity can be markedly improved. Nearly four years ago Dr. Cohen, the honored President of our Society, advocated the substitution of compressed and rarefied air for a change of climate, in a paper which he read before the American Climatological Association. Here he says:

"In many cases fully as much good can be secured by this treatment as by change of climate, and in a few much more; though, in the vast majority of cases in which change of climate is advisible, it is but a poor substitute."

There can be no doubt that compressed and rarefied air is inadequate when used alone in many cases, but when combined with pulmonary gymnastics and other judicious treatment, we are not sure that the results obtained are inferior to those which are derived from climatic treatment. Recent experience has shown us that when consumptives, who had spent one or two winters on the Rocky mountains, or on the Pacific slope, without benefit, were subjected to the use of compressed and rarefied air in association with other pulmonary exercises, such as are above described, their improvement became marked and decided. On the whole, our experience with the air treatment, combined with pulmonary gymnastics, has been very favorable, and we think that this is in consonance with the observations of others. Thus the late Prof. Flint, in his work on "Phthisis," says (p. 406) "it does not appear, from the analysis of my cases, that changes of climate have in a marked degree a beneficial influence, as compared with the hygienic measures available at home."

We believe, however, that, as a rule, these measures are applied too infrequently to be of the greatest service; and therefore, insist that the pulmonary gymnastics are repeated every hour and a half during the day—the first thing in the morning and the last thing at night—and for from fifteen to twenty minutes at each time; and that the air inhalations be given at first twice, and in the course of two or three weeks gradually increased to four or five times a day, and even oftener. It is very true that this method of treatment involves more labor and perseverance on the part of the patient than is required in a high mountain climate; but then it is a question whether the patient is not more than compensated by the consciousness that a separation from friends is unnecessary, that the heavy expense, the dangers and discomforts incidental to travel are avoided, and, above all, that the improvement which may take place will be persistent and be practically unaffected by a change of residence.

Now, after reviewing the whole subject, we are driven to the conclusion that the line of immunity from consumption, which, in the early history of our country, was located at the Atlantic seaboard, and which has gradually receded westward with the tide of civilization, until at present it has reached the latitude of Colorado, will not stop in its course until it touches the shores of the Pacific; that the question of curing the disease does not depend on the purity or freshness of the air, or upon the number of bacilli which the atmosphere may contain, or upon the amount of oxygen which may be introduced into the body—for these are all secondary considerations; but it is simply a mechanical question—a question as to the best mode of expanding the lungs, and especially the apices of our round-shouldered and flat-chested patients, of removing the infiltrated products already existing, and of enhancing the constitutional resistance.

—On the 19th of February the corner-stone of a polyclinic was laid with appropriate ceremonies at Rome, Italy. Dr. Bacelli, professor at the medical clinic, delivered the address.

Society Reports.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, February 27, 1888.

The President, Laurence Johnson, M.D., in the chair.

Dr. Charles W. Allen read the scientific paper of the evening, on

Leprosy in the United States, and its Relation to the State.

The history of leprosy in the United States was reviewed. The questions as to its hereditary and contagious nature and the necessity for segregation were discussed. Some years since leprosy appeared in South Carolina, and it has also appeared in Louisiana, and in more recent years in Iowa, Minnesota, Michigan, Wisconsin and Illinois, to which places it had been brought by immigrants; it is also present on the Pacific slope, being brought there by the Chinese. Some cases have appeared in the States bordering on Mexico, where it had been brought by those coming from the South. A few natives have acquired leprosy while visiting foreign lands, and there have been reported five cases among natives who had never been abroad.

The author continued the histories of some cases at the Charity Hospital, which had been first reported by Dr. Piffard in 1883, and also gave the histories of two other cases which had not yet been reported. One of the latter was presented to the Society. In this instance some disfiguring effects of the disease upon the eyebrows and face had led him to institute surgical interference for cosmetic reasons. The wounds had healed readily. Dr. Allen thought we might safely estimate the total number of lepers in this country at one hundred and fifty, and not count twice cases reported by different observers. Owing to the size and geographical location of the United States, he thought we were likely to have more and more cases visiting our country.

Dr. Allen, in discussing the hereditary and contagious nature of leprosy, gave the opinions of those physicians who had resided in countries where leprosy was common, and also the conclusions reached by the committee appointed to investigate the subject by the Royal College of Physicians of England, as well as the opinion of the majority of the members of the Academy of Medicine, Paris, which was in opposition to the view of contagion. The majority looked upon the disease as hereditary, but there was a growing number of believers in the contagious nature of the disease, and this belief had led in different countries to the segregation of lepers. Individual instances were given to show the contagious nature of the affection. Those looking for proof of its infectious nature often failed to consider that the period of incubation might be many months or several years. In view of the action of the Philadelphia Board of Health we should seriously consider, he said, whether or not the disease was sufficiently contagious to justify State regulation. Syphilis and tuberculosis were contagious diseases, but only slightly so, and they had come to be very prevalent. He might be asked, why not institute isolation of patients affected with the latter diseases? Dr. Allen said he would favor isolation if it could be shown that thereby those diseases could be stamped out. If there were danger of leprosy spreading in our country by contagion, he thought we should segregate the patients afflicted with the disease.

Referring briefly to treatment, he thought that it was beneficial, and mentioned the value of chaulmugra oil.

Dr. H. G. Fox opened the discussion, and said that while he was not prepared to offer proof for his views, it was his opinion that leprosy was both contagious and transmissible by heredity. Although he believed it was contagious, it could be only very mildly so, and for that reason, and the further reason that our conditions were different from those of people in leprous countries, he did not think the State would be justified in shutting the patients up, and excluding them from association with their fellow-men unless the latter were similarly affected with themselves. He did not look upon leprosy as an incurable disease. One case in which he had effected a cure, principally by chaulmugra oil, was that of a patient from whom he had recently received a letter, stating that there had been no return of his former symptoms. But if patients were deprived of their liberty, all hope being taken away, and were allowed to associate with none but those similarly afflicted, no kind of treatment would be likely to prove of much benefit.

Dr. P. A. Morrow also believed that leprosy was both contagious and transmissible by heredity; that it was a germ disease, although we know very little regarding the method in which the germs entered the sys-

tem and the conditions necessary for the development of the disease. While he believed leprosy was contagious, it was evident that it was only very mildly so, and he did not think there was any necessity for State regulation in this country. The disease as it prevailed in the Sandwich Islands should not be taken as a basis of comparison for its probable advance in this country. The conditions were entirely different. It seemed to be the common impression that in Norway the decrease in the number of cases was due to segregation; but this was a mistake, for the lepers there were not rigorously isolated; they were allowed to go out and see their friends.

Dr. D. B. DELAVAN thought some of our physicians took too optimistic a view of the question under discussion: the relation of leprosy to the State. We should ask ourselves three questions: First, was leprosy at all communicable; second, was it all times equally contagious; third, what had been the result of segregation? While it may not have been shown to be very contagious, yet its history in Europe during the middle ages afforded a very instructive chapter. It started at one corner, and rapidly spread its ravages through the whole of Europe. Could we be assured that such an epidemic would not occur again? Wherever leprosy had prevailed segregation had been found desirable. Comparing the disease with syphilis and tuberculosis, Dr. Delavan said that if these latter could be stamped out by isolating a dozen or more patients, we certainly would be justfied in that course; if leprosy could be prevented from any further spread in this country by isolating the few cases now present, he thought the State would be justified in exercising such sanitary police regulation. Dr. Delavan also spoke of the beneficial results from the use of chaulmugra oil.

Dr. KOPLIK said the question had occurred to him, Might not opening up the lymph channels in a surgical operation for cosmetic effects, as was done by Dr. Allen, be followed by more rapid progress of the disease?

The following resolution, framed by the Georgia Medical Society, was adopted: Resolved, that we urge upon Congress that, in the cause of humanity, the import duty should be removed from all medicines, medical and surgical appliances, and from everything used in the treatment and diagnosis of disease.

—J. H. Walsh, the editor of the English sporting journal *Field*, died Feb. 12. He was a physician and practiced medicine for some years. He is the author of "British Rural Sports."

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, February 22, 1888.

DR. W. W. KEEN in the chair.

DR. THOMAS J. MAYS read a paper on

Apex Expansion versus Pure Air in Pulmonary Consumption.

In opening the discussion on Dr. May's paper[1] DR. W. W. KEEN said: These are very practical questions presented for discussion. Change of climate involves expense, separation from friends, interruption of employment. Can we obtain equal benefits by home gymnastics or change of employment? There is also a novel question raised as to purity of air. These points should be discussed.

DR. WILLIAM OSLER said: The last statement of the paper contains a very important truth. With imperfect expansion there is a liability to clogging of the interstitial circulation in the apices and accumulation of tissue *débris* which may afford a nidus for the development of the bacillus tuberculosis. The condition of activity of this interstitial circulation differs very much in different individuals. We know but little yet of the conditions which determine the development of tuberculosis. In part, at least, it is like the old parable of the seed and the sower: the nature of the soil will favor, retard, or prevent the growth. That the bacillus of tubercle will not grow in every soil is demonstrated by autopsies in large general hospitals. At Blockley, we will find in every hundred sections, say, fifteen or twenty cases with the usual lesions of phthisis; in fifteen or twenty there are no excavations, the lung not extensively tuberculous, but at the apices are small areas of induration, caseous nodules, and a few peripheral miliary nodules. The soil has not been congenial, and the development of the bacillus was restricted. Without bacillus, no tuberculosis; and that opinion is shared by ninety-nine out of every hundred clinicians of the day.

DR. EDWARD MARTIN said: While connected with the department of physical education at the University of Pennsylvania, I had an opportunity of studying the effect of exercise on chest development. Lads admitted with narrow lungs and supraclavicular depressions suffer, after moderate exertion, with embarrassment of pulmonary circulation. The right heart is congested, and there is evidently blocking of the blood cur-

[1] See page 295.

rent in the lungs. After six or eight months of carefully regulated exercise, there is a change in the local condition; no more obstruction is offered to the right side of the heart than elsewhere; the blood-vessels respond to the extra demand put upon them. With this free circulation goes an increase of chest girth, from an inch to two or two and a half inches in six months. Inspiratory exercises are nearly always given these young men, especially those with that shape of chest which we are taught predisposes to phthisis. Among these exercises is prescribed deep breathing, with or without movement of the arms. The arm is raised from the body to a right angle by the deltoid. After that the lifting is done by the serratus magnus, the most important external inspiratory muscle. As the arm is carried nearer to the head, the insertion and origin of the serratus are approximated and the muscle works at a disadvantage. For this reason expiration is practised as the arms are carried up, and inspiration as they are brought down. Exercise should be made vigorous enough to stimulate the heart action. Slow motions, as a rule, do not strengthen the heart muscle, but have a local effect, whereas the object in these cases is to make the circulation free and the air tubes pervious.

Dr. C. W. Dulles said: Dr. Mays has done good service by calling attention to the fact that the conditions to secure which consumptives are recommended to live at high altitudes can be replaced by simple measures. My observation, though limited, corresponds with that of Dr. Mays, and I think that all of us have been struck with the fact that there is no direct ratio between the percentage of cases of phthisis and the breathing of impure air. We often see a number of persons huddled into small, unventilated rooms, with filth and drink and all the factors of disease, and yet apparently in blooming health. In such cases the men, who are engaged in active employment, and the children, who run about in the streets, enjoy better health than the women, who have less active exercise and who bend over washtubs or sewing work.

Dr. George E. Shoemaker said: I heartily agree with Dr. Mays that apex expansion is an important part of the treatment of incipient lung disease. A very important point is raised as to the action of rarefied air in expanding the apices. In localities that are warm, moist, and low—like Florida, for example—there is no such effect, and almost the sole benefit, as far as the climate is concerned, is from the patient's ability to be outside all the time. Now would it not be better to send more of our patients to a climate where direct good is gained by the more thorough ventilation of the lungs, reserving for Florida the very weak and those liable to excessive hemorrhage or to heart failure? In regard to impure air, we must remember that many of those persons who enjoy good health in spite of their home surroundings, live out of door most of the time, the children, in particular, living upon the doorstep or in the street, except in stormy weather. In the same way at mountain and seaside resorts, the small and uncomfortable rooms drive visitors out into the air; and whether or not ozonized or rarefied, it is pure, out-of-door air.

Dr. Mays said, in closing the discussion: It is rather unfortunate that Dr. Osler did not confine himself to the topic of the paper and discuss the main points of the subject in his usual able manner. I purposely avoided all except an incidental reference to the bacillus; but I must now say that I cannot accept the dictum, "no bacillus, no tuberculosis." It seems very strange that if the bacilli need a soil in which to develop they should be able to penetrate into that portion of the lung which is hardly ever expanded in phthisical patients. Why, if you take the two sexes and put them side by side in the same employment, do the men become diseased in greater proportion than the women? Why this fondness of the bacilli for one sex? I must also dispute the point that ninety-nine of every hundred clinicians accept this dogma. Though born in Germany, the doctrine is already losing ground among the Germans. I wish, in conclusion, to make a statement which I should have embodied in the paper, that, according to the latest researches, the apices expand more in the recumbent than in the erect position; therefore, a person inhales more air during sleep than in waking hours.

—Admiral Hutton Versturme, who retired from the British navy about a year ago, and lived near Falmouth, Eng., recently committed suicide. He was found in the drawing-room in front of the fireplace suffering great agony, with his wife also in the room insensible. A doctor found that he had thrust into his stomach a thin brass-handled poker, red hot, inflicting three severe wounds. He died the next day. He spoke several times, once saying, "It was because of the whiskey I did it." He was much distressed through not coming into a fortune that he had expected on the death of a relative.

Reports of Clinics.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

MEDICAL CLINIC—PROF. PEPPER.

Circumscribed Pleuritic, Simulating a Pericardial Effusion.

William B., aged 68. This old man was admitted to the wards about six weeks ago. The prominent symptoms from which he was suffering at that time was an urgent dyspnœa, and, what was remarkable in the case, there was no discoverable cause sufficient to account for it. The heart, for a man of his age, was quite normal; no organic lesion was present, and the pulse was regular and fairly strong. The kidneys were searched for some evidence of Bright's disease, which would offer an obstructed circulation as a partial explanation of the dyspnœa, but without success. Repeated examinations of the urine proved entirely negative. There was a slight cough present, but the lungs on being examined, were found to be quite healthy with this exception: at the right base posteriorly a small patch could be outlined, over which numerous small râles were heard. Some infiltration was present here, but no solidification. Bacilli were looked for in the sputa, but none were found. The patient was rather anæmic, and there was some slight febrile disturbance. This was all. Certainly there was nothing in these insignificant data to explain the markedly oppressed respiration. The man was placed upon a tentative plan of treatment and kept under close observation. As time passed, the area of infiltration at the base of the right lung increased in extent and spread upwards as high as the lower angle of the scapula. At the same time, the dyspnœa became even more harassing so that the patient was almost gasping for breath. As these conditions gradually acquired greater prominence, it was noticed that the area of cardiac dullness was extending; that there was a palpably increased fullness of the precordia, and that the heart-sounds were receding. A week ago the cardiac dulness extended, vertically, from the second to the sixth rib; horizontally, from the right border of the sternum to a point an inch outside the nipple line. The heart's impulse became almost imperceptible and its sounds could only be distinguished at the base. With all this, gentlemen, I venture to recall your attention to the fact that, on admission, the patient presented no evidence of any organic lesion of the heart.

Now what was the morbid condition here that we were called upon to treat? There was undoubtedly a large quantity of new material in the thoracic cavity, but was it solid or fluid, and what was the connection between it and the pulmonary lesion on the right side? The possibility of neoplasm, malignant or benign, was first considered. The evidence furnished by physical examination, however, was all against the adoption of such a view. Neither lung was displaced to any extent, nor was there marked dulness over them at any point; the position of the heart was not materially altered, its sounds and impulse being rendered indistinct by this new growth or effusion gradually surrounding it rather than pushing it aside. A solid body, moreover, would not have exhibited such rapid increase as was obtained here.

We had, therefore, to deal with a fluid, an effusion, and, in the entire absence of anything pointing to the existence of pus, a serous effusion. To verify this conclusion the needle of a hypodermic syringe was inserted just outside of the apex line of the heart and a drachm of serous fluid drawn off. Having in this way satisfactorily disposed of this first question, a second now presented itself for solution. Was this a collection of fluid within the pericardial sac or was it a circumscribed effusion into the left pleural cavity? It will be remembered that at the time of the patient's admission, the difficulty of breathing was most urgent, and yet careful examination of the heart at that time failed to reveal the presence of an abnormal amount of fluid within its enveloping membrane. The cause of the dyspnœa, therefore, was exo-cardial, and while this symptom steadily increased in severity, it was not until the man had been under close observation for some days, that the bulging of the intercostal spaces was noted, and the impulse and sounds of the heart began to grow fainter. From a careful review of this array of facts, we are led to believe that the effusion is pleuritic in origin, and that it is limited by old adhesions to the inner portion of the pleural cavity extending forwards to the anterior border of the lung and overlapping the heart. It is probably dependent upon a sub-acute inflammatory process, the exciting cause of which we do not know.

A week ago the needle of an aspirator was introduced into this distended cavity and thirty-six ounces of a clear serous fluid drawn off, the resulting relief to the patient being, as you may imagine, very great. My examination to-day shows that there is some re-accumulation of the serum, and I think it

likely that the tapping will again become necessary.

Before dismissing this case I wish to say one word with regard to exploratory punctures of the pericardial sac. When it is desirable that one of these shall be made, the point always selected by me for the insertion of the needle is the normal site of the apex beat of the heart. I puncture here because it is at this point that there is the least danger of wounding that organ. If any pericardial effusion occurs, even though it be slight, the apex of the heart being its most freely movable portion, is early displaced and pushed up of harm's way.

General Tuberculosis.

Harry S., 4 years old, youngest of eight children, the eldest of whom died a year or two ago of phthisis. The mother a healthy woman, but the father syphilitic. The child began ailing early in December last. The bowels became irregular in their action, constipation alternating with diarrhœa; colic was of frequent occurrence, the appetite became capricious, the stomach irritable, and vomiting easily induced. Irregular febrile disturbance, restlessness, and broken sleep became prominent symptoms, and the child underwent rapid emaciation. Examination reveals the following conditions: At the upper part of the abdomen, just below the border of the diaphragm, we find a network of dilated veins, these indicating the existence of some obstruction to the intra-abdominal circulation. There is no fluid of consequence in the belly, but on palpation it is found to have a doughy, inelastic feel, and is somewhat resistant to pressure. Passing upwards to the contents of the thoracic cavity, we find the entire right lung a mass of infiltration, tubercular deposits being disseminated throughout its whole structure, with commencing softening under the clavicle. There is, in addition, internal strabismus of the left eye which is strongly suggestive of tuberculosis of the cerebrum or meningeal membranes. To sum up, therefore, we have first extensive tuberculization of the peritoneum and intestines; next, a widely disseminated tuberculosis of the right lung; and, finally, a well-grounded belief as to the existence of intracranial tubercular deposits. Such general tuberculosis as this is rare in so young a child, and is particularly remarkable in this case because the first symtoms of disease were observed scarcely more than two months ago.

The treatment of such a case can, of course, be simply palliative. The most sanguine of therapeutists could not hope to effect a favorable issue. Elevation of temperature will be kept within bounds by moderate doses of antipyrine, and pain and diarrhœa controlled by opium. As other symptoms arise or occasion distress they will receive attention, but these are at present the leading indications.

Foreign Correspondence.

Letter from Canton, China.

It may interest the readers of the Reporter to hear and learn something of medical work in the far East, and of what the Canton Medical Missionary Hospital is doing for the Chinese. Ffty-two years ago this hospital began its work of benevolence in this great city which has a population of a million and a half. At first under the care of Dr. Peter Parker and others, it has for the past thirty-one years been nearly all the time under the care of Dr. J. G. Kerr, by whose skillful management and untiring devotion it has risen to one of the largest (if not the largest) hospital in the East, and with a reputation among the Chinese reaching all over this vast empire. It is impossible to get an adequate idea of the large amount of work done and good accomplished at this hospital year after year.

There are two departments, one for men and one for women, and at present two hundred and fifty in-patients can be accommodated. During some of the summer months every ward is crowded to its utmost capacity. While many cases coming under the class of general diseases are admitted, yet the work so far as in-patients are concerned is largely of a surgical nature. These include all affections that fall to the surgeon's lot at home, specially prominent among which are: urinary calculus; tumors, both malignant and non-malignant, including all varieties of cancer; caries and necrosis; cataract, etc. Two wards are devoted to cases of urinary calculus, and during most of the time there are from ten to fifteen of these patients present, either under preparatory treatment or already operated upon. During the past three years (Jan. 1, 1885, to Jan. 1, 1888) there were one hundred and twenty operations of lithotomy, and thirty-three lithotrity operations performed; the age of the patients ranging anywhere from one year to seventy-five years. Dr. Kerr has performed hundreds of these operations, and with reference to numbers and good results in this disease he probably stands as one of the first surgeons in the world.

Two days of the week are devoted to seeing out-patients who come in great numbers, as will be seen by the summary given below. Well trained native assistants do much of the routine work, and a medical class of young men receive regular instruction. Calls are frequently made to see patients who are unable to come to the hospital, and many of these are obstetrical cases.

A summary of the work for 1886 is as follows:

Number of out-patients,	13,000.
" " in-patients,	1,300.
" " operations performed,	2,200.

It is impossible at present to go into details, or report any of the rare and interesting cases that are constantly occurring in our practice.

Dr. Kerr is at present assisted by Miss Mary W. Niles, M.D., and the writer of this article; but until within a few years he has carried on this great work alone, living in this tropical climate, in a heathen city, hidden from the world and society, devoting his life to the relief of his fellow-men and the service of the Great Physician, for the advancement of whose cause he labors.

The influence of this hospital for good is far-reaching and untold. During the year 1885 there were patients from every province in the Chinese empire, except one, and from Manchuria beyond the northern border. Native students have gone forth to hold important positions. Instruction in the Christian religion is always a prominent feature in connection with the work. Numerous medical works, translated by Dr. Kerr, are known and in use wherever Western medical science is taught to the Chinese.

May the day be soon forthcoming when the medical profession in general will carefully inquire into the subject of medical missions learn what they are doing and of the great work yet to be accomplished by them.

Yours truly,

JOHN M. SWAN, M.D.

Canton Hospital, Canton, China,
January 14, 1888.

—The *Boston Med. and Surg. Journal*, Feb. 16, 1888, states that it appears from the annual report of the Harvard Medical School, 1886–1887, that not one-half of those who take the fourth year course apply for the fourth year degree. During the past four years 35 per cent. of the candidates for the fourth year degree have been rejected. The number at present in the fourth year class is stated to be 10.

PERISCOPE.

Microbes and Expired Air.

Strauss and Dubreuih (*Concours Médical*, No. 50, p. 601, 1887) have recently made extensive experiments, and working in a different manner have confirmed early results of Tyndall's, showing expired air to be entirely free from germs. Their method was to pass the air through tubes containing sterilized nutrient solutions, using about one hundred and fifty to two hundred liters of air for each tube. Almost without exception the tubes remained sterile, and the number that did not, could be accounted for by errors of manipulation. These experiments show that the lungs act as filters to the inspired air, an action easily explained by the conditions under which air circulates in the lungs, through narrow channels lined with moist epithelium. Grancher, Charrin and Karth, have already shown the air expired by phthisical patients to be free from the pathogenic bacillus. There is no contradiction between these facts and those long ago observed by Pasteur, and confirmed by many since then, showing the abundance of germs in hospital wards, barracks and other crowded apartments. It is not by the respiration that crowds charge the air with microbes. This is done by means of clothing, by the dust set in motion by their movements, and by dried and pulverized expectoration.

Quarantining School-Children after having Contagious Diseases.

The Section of Hygiene of the Academy of Medicine of Paris has recently reported to the Academy some suggestions as to the duration of quarantine to be imposed on school-children who have suffered with a contagious disease, among which whooping-cough is now classed in addition to the diseases named in the report of 1881. The present report was made to the section on hygiene by M. Ollivier. From the *Bulletin de l' Académie de Médecine*, Jan. 24, 1888, we quote the following suggestions:

1. Pupils attacked with chicken-pox, small-pox, scarlet-fever, measles, mumps, diphtheria, or whooping-cough shall be strictly isolated.

2. The duration of this isolation shall be reckoned from the onset of the disease—the first day of invasion; it will last forty days for small-pox, scarlet-fever and diphtheria; twenty-five days for chicken-pox, measles, and mumps. As the duration of whooping-cough is extremely variable, a return to school

should not be authorized until thirty days have elapsed after complete disappearance of the characteristic fits of coughing.

3. Isolation shall cease only when the convalescent shall have taken two or three soap-baths, and have been submitted to an equal number of general frictions, even of the hairy parts of the skin.

4. The clothing which the pupil had at the time when he was taken sick should be subjected to the action of steam under pressure or to the action of sulphur fumes, and then well cleaned.

5. The room which has been occupied by the patient should be well aired. Its walls and furniture shall be thoroughly disinfected; the bedding shall be subjected to the action of steam under pressure; and finally, the mattress shall be taken apart and submitted to the same treatment.

6. In any case the pupil, who shall have been attacked outside of a public school with one of the contagious diseases enumerated in this report, shall be received again only when provided with a certificate from the physician stating the nature of the disease and the time which has since elapsed, and attesting that the pupil has fulfilled the above requirements. Finally, the reception of the pupil shall always be subject to the results of an examination by the physician to the school.

Bacteriological Water-Test.

At the meeting of the Society of Medical Officers of Health (*Brit. Med. Journal*, Jan. 7, 1888), Mr. Gustav Bischof read a paper on extension of time of culture in Dr. R. Koch's bacteriological water-test by partial sterilization, with special reference to the metropolitan water supply. The following conclusions were drawn: 1. No bacteriological water-test can satisfy the demands of hygiene unless it is qualitative, distinguishing between harmless and pathogenic microphytes. No such test is at present known. 2. Merely numerical results, without such distinction, are entirely unintelligible, unless the time and other conditions of culture of each test is specified. 3. A small portion only of the colonies capable of growing in gelatine peptone is indicated by three days' culture. 4. The ratio of colonies thus indicated by three days' culture to that of the total present appears to differ so widely in different samples that the numbers of colonies obtained from them cannot be compared with each other. 5. Instead of any such comparison, the changes taking place from time to time should be followed up in each sample separately. 6. Extension of culture beyond three days increases the reliability of the results. How far this holds good, and how far culture should be extended, we have at present not sufficient evidence to show. 7. The usefulness of results is probably still further increased by combination of extension of culture with storage in sterilized flasks for a certain time. 8. As regards the control of the working of sand filtration at waterworks, any bacteriological test, to be of practical utility, should be repeated at intervals certainly not exceeding a fortnight. 9. It is desirable for the purpose of such control to test the water entering and leaving each filter.

Aprosexia.

"Aprosexia," a word clear to the Greeks, is the name of a new disease discovered by Guye, of Amsterdam. He understands by it a specific disturbance of the functions of the brain, appearing in the form of an inability to direct the attention to a particular subject. The well-known nasal reflex, the scapegoat of many who cannot explain a phenomenon, is brought forward again in this disease: aprosexia is a condition of exhaustion in consequence of difficult breathing in nasal diseases; certain cases of "overwork" belong to it.

As put by the critic in the *Berliner klin. Wochenschrift*, Dec. 5, 1887: "if Guye is correct, the future 'school-doctor' will have to examine the noses of scholars on the rear benches most thoroughly."

Dysentery with Gangrene of the Left Foot.

At a meeting of the Royal Academy of Medicine in Ireland, December 2, 1887, (*Lancet*, January 28, 1888), Dr. W. G. Smith reported the case of a young woman, 19 years old, who was admitted into the hospital September 2, 1887, suffering from intractable diarrhœa of a week's duration. Her illness had commenced suddenly, and followed the eating of some stale fish. When admitted she was in a state of extreme prostration; pulse 120, temperature 99.5°; frequent dysenteric stools. No treatment proved of any avail, and she died after a week's stay in hospital. Two or three days after admission her left leg was observed to be very cold. It was also painful, especially in the popliteal space, and purple patches appeared on the foot. These latter increased and deepened. Dry gangrene attacked the toes, and spread over the sole of the foot. At the autopsy, characteristic signs of dysentery were found, but no vascular obstruction to account for the gangrene.

Acute intestinal Obstruction; Laparotomy; Recovery.

The *Lancet*, January 7, 1888, reports the case of a man, 45 years old, a laborer, who was admitted on April 30, 1887, to St. Bartholomew's Hospital, under the care of Mr. Morrant Baker. The patient gave a history of double, reducible inguinal herniæ, of many years duration. A truss had been worn during the previous eight years. He had also a small reducible umbilical hernia. The patient had been quite well up to the morning of April 25 (five days before admission), when, after working about half an hour, he was suddenly seized with severe abdominal pain, which was referred to the umbilicus, and thence downwards to the right side of the pubes. The pain was of a dragging character, and thinking that it might be due to the hernia on that side not being quite all reduced, he lay on his back and re-adjusted his truss, but without relief. The pain continued all that day and the next, but he still remained at work, and vomited a little on both days. On April 27, the pain was worse, and the vomiting more frequent. On the 28th and 29th the pain and vomiting had increased. On the day of admission (30th) the patient was much worse and very weak, the pain being intense, and he had vomited at least twenty times in the twenty-four hours.

On admission, he was much collapsed, with all the symptoms of acute intestinal obstruction. The abdomen was somewhat distended, and acute pain was complained of, extending from the umbilicus to the right side of the pubes. The tongue was thickly furred and dry; the pulse 84, and weak; the temperature 99.6° F. There was frequent vomiting of a foul-smelling, green liquid. The patient did not remember having passed flatus after the onset of the pain.

After chloroforming him, the herniæ were carefully examined, and found to be easily and completely reducible. The abdomen was therefore opened, and on the right side was found a sense of resistence as though "the coils of intestine were tethered in some abnormal way." In endeavoring to find the cause for this, and in making some traction on the tense bowel, the coil suddenly came into view, and presented to the eye at once an intensely inflamed spot of about the size of a florin with dusky centre. The inflamed surface was rough, as if it had been firmly adherent and tightly gripped. The piece of intestine was immediately returned and the abdominal wound stitched up in the usual way. The patient was immediately relieved by the operation, and convalesced rapidly.

The author in commenting on this case, expresses the opinion that it was one of strangulated obturator hernia. This, he thinks, is indicated by the fact that other herniæ existed. At all events, he regards it as a case of intestinal obstruction which would have proved fatal without operation.

Mental Disorder Caused by Jaborandi.

Dr. Wauzh, of Liège, who has great belief in the efficacy of jaborandi as a stimulant of the mammary functions, mentions a case which has recently occurred in his practice, showing that inconveniences may occasionally arise from the administration of this drug. He prescribed ten drops of the fluid extract every four hours for a patient whose milk had ceased for a fortnight, with satisfactory results, the secretion being re-established. After a time, however, the patient began to suffer from extreme nervous excitement, accompanied by a fixed idea that she should murder all her family with a hatchet. On the jaborandi being stopped, these alarming symptoms disappeared, and together with them the activity of the mammary glands.—*Lancet*, December 24, 1887.

Primary Inflammation of the Internal Ear.

G. Gradenigo contributes to the *Arch. für Orenheilkunde*, xxvi, S. 46, the result of an anatomico-pathological investigation upon the organs of hearing of a deaf-mute girl, fifteen years old, who died of pulmonary phthisis. Anatomical information with reference to the primary affection of the ear was wanting. The autopsy disclosed bilateral complete destruction of the membranous labyrinth, and of the elements of both windows of the labyrinth; and new formation of fibrous and bony tissue, which appeared especially pronounced on the left side, where there was, in addition, a chronic suppurative inflammation of the middle ear. The newly-formed bone tissue is derived partly from the endostium of the labyrinth—periosteal bone, which is present only in the vestibule and gyrus basilaris cochleæ; and partly from direct proliferation of newly-formed fibrous tisssue—especially in the cochlea bordering on the modiolus. There was no trace of the semicircular canals; the vestibule was decidedly narrowed; and in the cochlea the new-formed bony tissue diminished as the apex was approached.—*Centralblatt f. d. med. Wissensch.*, Dec. 10, 1887.

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THE ABUSE OF ALCOHOLIC BEVERAGES.

Among the many interesting and important subjects discussed at the recent Hygienic Congress in Vienna, none was more interesting or more important than that of the abuse of alcohol as a beverage, and the means for correcting this abuse. The discussion which took place at the Congress has been followed by an equally interesting one by the members of the German Society of Public Hygiene, which is reported in the *Deutsche Medizinal-Zeitung*, Feb. 6, 1887, and in which a number of men who had attended the Congress took part. At this meeting, SPINOLA made an address, in which he described the great increase of liquor-drinking in civilized countries during the last few decades, and attributed this increase largely to the cheapness of strong alcoholic beverages, and the multiplication of what are called in this country drinking saloons. To this statement of the causes of the increase in the consumption of alcoholic liquors, he added some suggestions in regard to the best way to correct the abuse, which may well be reproduced.

These suggestions include action by governments and action by citizens banded together in voluntary organizations. The duty of governments consists in regulating the liquor-traffic, by imposing taxes, so arranged that they will make strong alcoholic beverages comparatively costly, and mild alcoholic beverages comparatively cheap. Further, governments should restrict the number of places in which alcoholic beverages are sold; should subject them to close supervision, and regulate the quality of liquors sold, as well as the methods of dispensing them. It was further suggested that governments should exercise a strict supervision over persons addicted to the abuse of alcoholic beverages, confining them when they become public nuisances, or when they neglect to support themselves or those naturally dependent upon them.

The duty of citizens, as citizens, was defined by Spinola as consisting in supporting the government in its efforts to lessen the evil of intemperance, and in organizing to promote temperance—or total abstinence, if that be preferred—and in furnishing the poor with sound teaching, good food, non-intoxicating beverages, and rational forms of amusement.

To the support of these opinions, which were those of the Vienna Congress, as well as his own, Spinola brings an array of statistics which is of the greatest value. It seems clear from them that the abuse of alcoholic beverages is actually the great evil which most independent observers believe it to be, and that the methods he suggests are well calculated to correct it. We have no space in which to reproduce the details of his statistics; but we think it worth while to call attention to the plan which has worked so well in Norway and Sweden, where the so-called Gothenburg system is in force. The essential features of this system are that a responsible society purchases the right to sell liquors, and that the profits are used to pay interest upon the capital of the Society, and the excess above this interest is devoted to public and charitable uses. A detail of the system, which is not without influence in

diminishing the abuse of alcoholic beverages, consists in the fact that the keepers of drinking-places may not sell alcoholic beverages for their individual account; but may so sell non-alcoholic beverages and articles of food. This gives them a direct interest in diminishing the use of alcohol, and encouraging that of articles of food and drink which contain no alcohol. As a result of these measures, and of careful supervision by the government, the average consumption of strong drink in Norway, which was fifty-four liters *per capita* annually fifty years ago, is now only eight liters, or about one-seventh of the former figure.

The facts stated above are of great interest to the citizens of this country, in connection with the efforts now being made to correct the abuse of alcoholic beverages which afflicts the United States. We have, from time to time, published information in regard to the operation of laws for the regulation of the liquor traffic, indicating our sympathy with the endeavor to lessen as much as possible the dreadful effects which it entails upon our own land, as well as upon all civilized lands. And we wish to do all in our power to secure the co-operation of the medical men of America in the labors of benevolent men of all callings to correct, as far as possible, the curse of intemperance. No class in the community knows better than physicians do the bitter effects of intemperance; and none can more appropriately discuss these effects, or suggest methods for preventing them.

MEDICAL EDUCATION IN THE UNITED STATES.

In the *Report of Proceedings of the Illinois State Board of Health*, at its annual meeting, January 12–13, 1888, there is a very interesting review of the condition of medical education in this country. The data gathered by the Illinois Board of Health indicate a continuing improvement in the methods and an elevation of the standard of medical education in the United States. The report states that there are now one hundred and fourteen medical schools which exact an educational preparation of intending matriculates, as against forty-five formerly; forty-three schools now require attendance upon three or more courses of lectures as against twenty-two formerly; and fifty-seven provide for a three or four years' graded course. The average length of each course of lectures has increased, and sixty-three schools have terms of six months or more. One of the effects of a higher standard of medical education is seen in a decreasing proportion of graduates to matriculates.

These facts may serve to encourage those who desire and labor for a high standard of medical education in America. An improvement in this respect is much needed. We are not of those who think that one standard can be made for all the schools of this country; because we think that the varying conditions of wealth and population make it impossible to require of those who practice in different portions of this wide land the same degree of education. There are many sections of the United States which would have no physician at all, if no one could be a physician except at a cost of time and money which but few can spare. For this reason we see a distinct field of usefulness for medical schools which exact attendance on only two courses of lectures. But we think that such schools should not pretend to exact more, and that they should use their "liberty as not abusing it;" and that they should make the very most they can of the time during which their students are under their control. The course of time and the material development of our country may be trusted, we believe, to bring about an improvement all along the line of medical education; but no effort should be spared to raise the standard everywhere, so that it should nowhere be despicable. It is not enough to show that excellent practitioners come—as they do—every year from schools with short terms of study; for there can be no doubt that these same excellent practitioners would do their work better if they studied a longer time. So it is a good thing to encourage and stimulate all the medical schools of America to set before them a high ideal, to which some can and will come nearer than

others, but toward which all should strive to approach as much as the conditions peculiar to each will permit.

LIPANINE—A SUBSTITUTE FOR COD-LIVER OIL.

In the *Therapeutische Monatshefte*, February, 1888, Dr. J. von Mering has an interesting paper, in which he discusses the relative merits of brown and white cod-liver oil, and expresses the opinion that the generally admitted superiority of the former is due to the fact that it contains a larger percentage of oleic acid than the latter does. This opinion has led him to make an artificial compound of olive oil and oleic acid—six parts of the former to one hundred of the latter—which is less objectionable than brown cod-liver oil, on the score of taste, and which seems to possess many of the nourishing properties of the latter. This compound is now introduced in Germany under the name of "Lipanine." According to von Mering, it is not disagreeable in taste or smell, and it is very easily digested. It is easily emulsified in a weak alkaline solution, corresponding to the alkalinity of the contents of the bowels, and hence it is easily absorbed by the lacteals of the intestines. As a result of this fact it is possible to administer it in large doses and for a long time without arousing disgust or causing indigestion. Von Mering has given lipanine to more than forty patients in six months, thirty of them being children. All took the compound well, and it never caused nausea, vomiting, indigestion, or diarrhœa. The children to whom it was given were scrofulous or rachitic; and of the adults, four had phthisis and ten had diabetes. In all these cases the patients gained in weight and their general condition improved. The dose administered was from one to four teaspoonfuls daily to children, and from two to six teaspoonfuls daily to adults.

The results of the administration of lipanine, announced by von Mering, suggest the advisability of testing this remedy in this country. It is so easy to make and so convenient to administer that enterprising pharmacists may be expected to place it soon before the medical profession of America. A palatable substitute for cod-liver oil is a thing much to be desired, and we hope this one may prove as valuable as its inventor believes it to be.

NERVE SUTURE AND NERVE STRETCHING.

A great deal has been done in the last few years—especially in Europe—in the direction of uniting the separated ends of divided nerves, and a number of methods have been devised by which the ends might be brought together when the gap between them was considerable. Various processes of grafting, by flaps and by the interposition of materials intended to serve as a sort of scaffolding for the budding prolongations of the cut ends have been devised, and have been employed with considerable success. But only recently Prof. MAX SCHÜLLER, of Berlin, has put into practice a plan which promises better results than any which we have yet seen proposed. This plan consists in making use of the well-known elasticity of the nerves, by laying bare a portion of the central, and, if convenient, of the peripheral end, and then stretching them over the gap until they meet and may be directly united by sutures of catgut. In the *Wiener Med. Presse*, January 29, 1888, Schüller reports a most interesting case in which he employed this method, with signal success. The patient was a worker in a chemical establishment, who in November, 1884, wounded himself in the palm of the right hand with a piece of glass broken from a bottle which he was corking. The symptoms pointed to a division of the median nerve; and when Schüller operated in May, 1885, soon after first seeing the patient, this was found to have occurred, and also, that a piece of glass was embedded in the imperfect scar at the seat of the wound. The operation consisted in laying bare the nerve from the lower part of the forearm to the middle of the palm, excising the scar tissue, removing the fragment of glass, and uniting the severed parts and branches of the nerve with fine catgut sutures. After this the wound in the skin was closed and dressed antiseptically, and

the hand and arm were fixed upon a suitably curved dorsal splint.

The issue of this operation was most satisfactory, and furnishes strong evidence of the value of the method. In carrying it out it would be well to follow the example of Schüller in sparing the nerve-fibrils as much as possible when applying the sutures, and in passing these very carefully, with delicate curved needles, such as are used in stitching a wounded bowel, through the sheaths of the nerve only. So far as the extent to which a nerve may be safely stretched is concerned, Schüller believes, from the result of his experience, and of certain experiments which he has made, that a gap of an inch and a half in the main nerves of the extremities can be bridged in this way. Violent and too extensive stretching would not commend itself to any prudent surgeon; but, within the bounds suggested by Schüller, we think that nerve stretching will prove a very valuable preliminary to nerve suture.

PASTEUR AND PESTILENCE.

It is reported from London that the inhuman proposition made some time ago by Pasteur, to send to Australia the germs of fowl-cholera, to be scattered among the rabbits, which prove such a nuisance there, is being carried out. It is stated under date of Feb. 27, that three agents of Pasteur have sailed for New South Wales, with material to spread the fowl-cholera among the rabbits, in the hope of exterminating them. This incident, of heartless and cold-blooded cruelty, may perhaps open the eyes of some persons who have accepted the posing of Pasteur, and the claims of his admiring son-in-law that he is a great humanitarian. If those who live near him are to believed, there never was a man who more carefully calculated the commercial value of his scientific work, and this last act shows that he is a man, who for the hope of the large reward which has been offered for the extermination of rabbits in Australia, will deliberately sow among them the seeds of a slow and torturing disease. What is to be thought of the Government of Australia if it permits this plan to be carried out, we do not venture to say, since the plan has not reached the stage of execution yet. But we hope the people of Australia will find a way to prevent the carrying out of this mercenary and cruel scheme. Humanity should prompt them to this, not to mention the possibilities of danger to man himself which are involved in spreading a deadly disease among animals.

FORCIBLE FEEDING OF THE INSANE.

In the *Wiener Med. Presse*, February 5, 1888, Dr. Julius Rader, physician to the Austrian Insane Asylum at Ybbs, describes the case of a woman affected with delusional insanity, who indulged in periodical fastings from 1881 to 1887. The longest fast was for twenty-one days. The study of this case leads Rader to deprecate the practice of forcing food upon insane persons who have made up their minds to eat nothing. This practice he holds—and we believe with reason—to be not only useless but dangerous. That it is useless is shown by the fact that persons, both sane and insane, have been known to go without food for long periods of time without material disadvantage, and that the insane seem to bear fasting better than the sane. That it is dangerous is evidenced by the fact that not a few cases are known in which serious injury has been done to insane persons by the violence necessary to force food into their stomachs, which they can, and do sometimes get rid of immediately by vomiting. In addition to this, in a number of cases one effect of this vomiting has been to lead to aspiration of vomited matter into the lungs, and a consequent pneumonia.

Bearing these facts in mind, we can approve Rader's suggestion that more is to be feared than is to be hoped for from forced feeding of the insane, and that it would be well for those who have the care of these unfortunates to dismiss their alarm at an obstinate refusal to take food for many days, and to relinquish the notion that, under such circumstances it is desirable to bind the patient, introduce a stomach tube, and force food into an unwilling and intolerant guest.

Book Reviews.

[Any book reviewed in these columns may be obtained, upon receipt of price, from the office of the Reporter.]

CONTRIBUTIONS TO THE STUDY OF THE HEART AND LUNGS. By James R. Leaming, M.D., Emeritus Professor of Diseases of the Chest and Physical Diagnosis in the New York Polyclinic, etc. 8vo, pp. 300. New York: E. B. Treat, 1887. Price, $2.75.

This handsomely printed book contains a series of papers on diseases of the heart and lungs, read and published by the author between 1865 and 1875, and discussions of the therapeutic value of chloride of ammonium, mercury and thuja occidentalis. Most of these papers have been before the profession long enough to receive criticism from those who dissented from any of the views expressed, and the author has presented them again in the shape which his mature reflection approves, after giving careful consideration to the opinions which have been expressed in regard to them.

The result is a book which contains much valuable information in regard to various physiological conditions of the heart and lungs, and which is calculated to be useful, as it certainly is interesting.

THE INTESTINAL DISEASES OF CHILDHOOD. By A. Jacobi, M.D., President of the New York Academy of Medicine, etc. 5½ x 7 inches, pp. xvi, 301. Detroit: Geo. S. Davis, 1887. Price, 25 cents.

This book is the number for September, 1887, of what the publisher calls "The Physicians' Leisure Library." The numbers are supposed to be issued monthly, at a subscription price of $2.50 a year. Some of these books are excellent; but some of them bear manifest marks of being made to order. This one is an example of what we mean. It is divided into chapters or sections, some of which are ridiculously small: one containing exactly four lines. Of course what Dr. Jacobi says about the diseases of children deserves respectful attention; but we regret that he has in this instance consented to make a book which few lovers of books will think worthy of his reputation. The publisher's part of the work is marked by evidences of carelessness and a lack of a good book-instinct, which are abundantly illustrated in the table of contents.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION FOR THE YEAR 1886. Vol. iii. Edited for the Association by Alfred Ludlow Carroll, M.D. 8vo, pp. viii, 601. Concord, N. H.: Republican Press Association, 1887.

This is an exceedingly handsome volume, which does equal credit to the scientific status of the State Medical Association of New York, and the wisdom and skill of the Committee on Publications and of its Editor. The papers cover a wide range of medical and surgical subjects, and the book contains memoirs and handsome portraits of Drs. Austin Flint, Frank H. Hamilton and John P. Gray. Where there is so much of value and interest it would be impossible to select a few papers for notice without being invidious; and we must content ourselves with expressing our admiration of the whole in this general and unstinted way.

THE BONES OF THE LEG CONSIDERED AS ONE APPARATUS. By Thomas Dwight, M.D., Parkman Professor of Anatomy at Harvard University. 8vo, pp. 18. Boston: Cupples & Hurd, 1888. Paper. Price, 25 cents.

This interesting monograph upon the tibia and fibula, studied in their relations to each other and to the neighboring soft and hard parts, is the substance of a lecture delivered at the Harvard Medical School, Nov. 14, 1887. It contains a description of the shape and direction of various parts of these bones, and explains the mechanical principles involved in their reciprocal relations, and is illustrated with diagrams showing the bones in profile and in cross-section.

THE NATIONAL SIN OF LITERARY PIRACY. By Henry Van Dyke, D.D. Small 8vo, pp. 23. Paper. New York: Charles Scribner Sons, 1888. Price, 5 cents.

This little tract on what is now a burning question contains a sermon recently preached by Dr. Van Dyke at his church in New York. It is reprinted, and sold at a nominal price by the Scribners as a contribution to the discussion of international copyright, which is now going on in literary and commercial centres. Dr. Van Dyke takes a firm stand against the pillaging of authors which is so common on both sides of the Atlantic; but turns his attention especially to that which prevails in our own country. It is true that the English need such censure as he administers to our own countrymen as much as the latter do; but we agree with his obvious opinion that we should pluck the beam out of our own eye before undertaking any operation upon the eye of our brother. We share the growing desire in this country for an international copyright law, and welcome this effort to hasten its coming.

THE NEW YORK MEDICAL JOURNAL VISITING-LIST AND COMPLETE ACCOUNT BOOK. Prepared by Charles H. Shears, A.M., M.D. New York: D. Appleton & Co. Price, $1.25.

Our high regard for the *New York Medical Journal* makes it unpleasant for us to say what we think about this new candidate for professional favor. The publishers' opinion is that it is "without doubt the most perfect visiting-list ever offered to the profession, as it possesses all the advantages without the objectionable features found in all others." Our opinion is that it lacks the most important advantages of most visiting-lists, and, in fact, is not a visiting-list at all. It may meet with approval by physicians; but we think it will not. As a book, it is very dear indeed, at the price asked for it.

Pamphlet Notices.

Conservative Gynecology. By George F. Hulbert, M.D., St. Louis. From the *Weekly Medical Review*, Dec. 17, 1887. 10 pp.

Recent Advances in the Surgery of the Brain and its Coverings. By Charles B. Nancrede, M.D., Philadelphia. From the *Medical News*, Jan. 28, 1888. 28 pp.

Report on the Progress of Forensic Medicine and Toxicology. By Martin V. B. Clark, M. D., Sutton, Nebraska. *State Journal Company*, Printers: Lincoln, Nebraska, 1887. 16 pp.

LYSSA AND THE PASTEUR FIASCO. By N. E. BRILL, A.M., M.D., New York. From the *Journal of Comparative Medicine and Surgery*, January, 1888. 23 pp.

THE SIGNIFICANCE AND LOCALIZATION OF PAIN IN PELVIC DISEASES. By HENRY COE, M.D., New York. From *Gaillard's Medical Journal*, February, 1888. 10 pp.

CONTRIBUTION À L'ETUDE DE LA SYPHILIS DES FOSSES NASALES. PAR LE DR. E. J. MOURE, Paris: *Octave Doin, Editeur*, 1888. 12 pp.

SUB-PUBIC DISLOCATION OF THE LEFT FEMUR. By J. S. WIGHT, M.D., Brooklyn, N. Y. From the *Transactions of the Medical Society of the State of New York*, 1887. 4 pp.

—Dr. Hulbert's paper contains an argument against the procedure of divulsion of the cervix uteri, which he believes to be a pernicious practice. His argument includes a careful study of the anatomy and physiology of the uterus and of the mechanical principles involved in flexions and so-called stenosis. The latter he believes to be misunderstood by many gynecologists, and he criticises sharply the common illustration, by a bent tube, of the condition supposed to obtain in cases of flexion of the uterus.

—Dr. Nancrede's paper contains a very good summary of the present state of knowledge in regard to the proper way to treat injuries of the brain and its envelopes. The author, like most surgeons of the present day, favors active surgical interference in cases of actual or probable fracture of the skull, of wounds passing into or through the bones of cranium, of tumors, abscesses, morbid growths, and hemorrhages within it. He also favors operations for epilepsy when this seems to be caused by a removable mechanical irritant. We do not think that the surgical world will be as much surprised at his statements as he seems to fear they will be; for most of them are to be found elsewhere, and surgeons who read have had a fair a chance to get used to them.

—Dr. Clark's pamphlet contains a full account of his investigations in two cases of supposed felonious poisoning. In one, the poison used was arsenic, and in the other it was strychnia. In both cases the patients died, and a trial for murder followed. Both of the accused persons were acquitted on the ground that it was not proved that they had administered the poison. The details of Dr. Clark's analysis are interesting and instructive, and indicate the thoroughness with which he did his work, leaving no possible doubt of the presence and nature of the poison in each case. In the second case, he came near losing his life from testing an extract of the stomach—supposed to be strychnine—upon himself.

—Dr. Brill applies to the popular theories in regard to hydrophobia, and to the claims of Pasteur in regard to his preventive inoculations, an uncommonly keen analysis and criticism. It is still held by men of deserved eminence in the medical profession that hydrophobia is a specific, inoculable disease; and some of them still trust in the assertions of Pasteur in regard to his method of treating it. But the number of those who have studied both so-called hydrophobia and Pasteur's shifting announcements is increasing, and hydrophobia and Pasteurization are less the rage than they once were. It is to be hoped that hydrophobia will yet disappear—as witchcraft has disappeared—and that such works as this of Dr. Brill, which we strongly recommend to the attention of our readers, will be estimated, as it deserves to be.

—Dr. Coe's interesting paper on pelvic pain treats of the nature and character of this important means of diagnosis, and advocates the use of electricity to remove it. The author believes that pelvic pain originates more frequently in the perimetric tissues than in any particular organ, and that it may radiate from inflammatory foci in the peritoneum or connective tissue surrounding the pelvic organs. For this reason operations upon these organs may fail to cure the pain, which may be materially relieved by the use of electricity.

—Dr. Moure's pamphlet contains a detailed account of two cases of syphilitic lesions within the ala of the nose. In one of them the lesion was the initial lesion of syphilis—a chancre; in the other it was a syphilitic gumma. Both lesions are extremely rare in this situation, and great interest attaches to an authentic account of such well studied and well described cases.

—Dr. Wight describes the case of a man upon whom four barrels of flour fell, producing a sub-pubic luxation of the head of the left femur and a compound fracture of the right femur. The main interest in the history of this case is connected with the manner in which the luxation was reduced—being converted first into a thyroid luxation, which was then corrected by replacing the head of the bone in the cotyloid cavity. This method is not new; but Dr. Wight's way of carrying it out was more or less extemporaneous and worthy of imitation. It consisted in passing the patient's leg over the surgeon's right shoulder, and combining traction, adduction, elevation, and manipulation with the hands until the head of the bone slipped into the thyroid foramen, after which flexion of the thigh, abduction, traction, and rotation inward, brought it into its normal position.

LITERARY NOTES AND QUERIES.

[In this column the REPORTER will publish short items of literary interest and questions addressed to this Journal or its readers, and answers to them, in regard to any literary matters: books, authors, places and prices of publications, etc.]

—*The Annals of Surgery*, which has just entered upon its fourth year, under the management of Dr. L. S. Pilcher, of Brooklyn, and Dr. C. B. Keetley, of London, is the only periodical, published in the English language, which is devoted exclusively to surgery. Each number contains original articles, and admirable summaries of surgical progress, as well as able editorials on subjects of timely interest. *The Annals* are published monthly at St. Louis, in octavo form, about 80 pages, by J. H. Chambers, price $5.00 a year. We can heartily commend it to the attention of those of our readers who have an interest in surgery.

—Blizzards, apparently, are becoming ordinary occurrences in Dakota, for a Western exchange remarks casually that, "after a blizzard the other day," Dr. Wheeler, of Grand Forks, and a number of friends took a ride on the doctor's ice-boat, going at the rate of 23 miles an hour.

CORRESPONDENCE.

Prescribing Druggists.

EDITOR MED. AND SURG. REPORTER:

I was called to-day to visit a patient seriously ill with pneumonia following measles, and learned that she had been taking for several days a "cough mixture" prescribed by an M.D. druggist for a *bad cold*, so that important time for treatment of her disease had been lost. Returning to my office I found in the REPORTER, February 11, an editorial upon the subject of "prescribing by druggists," which prompts me to write a few lines—not because I believe it will mitigate the evil here, but in the hope that it may arouse others in the profession to demand our rights, and to teach druggists to confine themselves to their legitimate business. This can only be done by concert of action on the part of the profession; for so long as a few physicians pander to the mania of druggists for prescribing in order to secure their influence for patronage, so long will druggists continue the practice. They cannot do it for pecuniary gain, because usually a prescription would prove more remunerative than the medicine furnished. Druggists expect physicians to send their prescriptions to them, they do all in their power to deprive the physician of his fee. This is the pecuniary standpoint, but there is another of more importance, a druggist may have a diploma to practice medicine, but when he undertakes to diagnosticate and treat diseases from behind his counter, without examining the patients carefully, and sometimes without ever seeing them, he is assuming a very great responsibility, it is not only the harm his medicine may do, but there is important time lost; and if a physician is called and the patient dies, the credit of the result does not go to the druggist but to the doctor. If the public could only know the evil this prescribing over the counter entails upon the patient, no druggist—whether he be an M.D., Ph.D., or no D. at all—would dare do it. A druggist may say that if he do not prescribe, the patient and his patronage will go to another druggist. But if there were concert of action among physicians, druggists would soon learn that the patronage of the physician is worth the most. This is a growing evil, and as the profession is becoming more and more crowded, M.D.'s are entering more into the drug business, and competition for prescribing is proportionately increased. Our State and county societies should take some decided steps in the matter, and our legislatures should be petitioned for some law to protect the people. I venture the assertion that druggists to-day do ten-fold more harm in prescribing over their counters and selling quack and proprietary medicines than all the charlatan doctors combined.

Yours truly, B. P. REESE.

Staunton, Va.,
February 3, 1888.

Amylene Hydrate.

EDITOR MED. AND SURG. REPORTER:

Sir:—Where can I obtain amylene hydrate, and at what price?

Yours truly,
A. S. MAXSON, M.D.

Milton Junction, Wis.

[Amylene hydrate is tertiary amylic alcohol. It is a clear fluid, of a camphoraceous taste and odor, soluble in eight parts of water, and in alcohol in all proportions. A convenient method of administration is with licorice:

Amylene hydrate,
Fluid ext. licorice.....āā..f℥j
Water, to make.....f℥j
Mix.

This may be given in a single dose; but Avellis, in the article referred to in the REPORTER, February 14, 1888, p. 154, has obtained good results from doses of one half to two-thirds of this quantity. The drug may be obtained from any reliable chemist, at about 60 cents an ounce.—ED. REPORTER.]

Sudden Death in Typhoid Fever.

With reference to his letter in the REPORTER, February 25, 1888, p. 220, Dr. Hunter writes that "the 24th day" referred to the day of the month, not the day of the disease, as the patient lived only fifteen days. His temperature on the fourteenth day of his disease (January 24) was 100½° F., not 101½°.

—*Public Opinion*, Feb. 11, 1888, states that a new gas has been discovered in Germany by Dr. Theodore Curtius, who has succeeded in preparing the long-sought hydride of nitrogen, amidogen, diamide, or hydrazine, as it is variously called. This remarkable body, which has hitherto baffled all attempts at isolation, is now shown to be a gas perfectly stable up to a very high temperature, of a peculiar odor—differing from that of ammonia—exceedingly soluble in water, and of basic properties. In composition it is nearly identical with ammonia, both being compounds of nitrogen and hydrogen.

Notes and Comments.

A National Pharmacopœia.

The following bill, relating to the publishing of a National Pharmacopœia, has been introduced into the House of Representatives by Mr. Samuel J. Randall.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury shall, as soon as practicable, detail two officers of the Marine Hospital Service, and the Secretary of War shall detail two officers of the medical staff of the Army, and the Secretary of the Navy shall detail two officers of the medical staff of the Navy, for the duty of compiling and preparing a pharmacopœia, which shall be known as the National Pharmacopœia of the United States of America, and shall be held and accepted as the standard for the purveying, compounding, and dispensing of drugs or medicinal agents, and shall be taken as authority in the Treasury Department on all questions arising under the tariff laws of the United States with regard to the nomenclature, description, and purity of drugs or remedial agents, and shall further be received as evidence in the United States courts. And the matter contained in the said pharmacopœia shall be free for use by all authors and commentators for the benefit of the medical and pharmaceutical professions and of the community at large; and it shall not be lawful for any one to reprint and publish the said pharmacopœia as a whole.

Sec. 2. That the medical officers detailed as above provided shall invite the American Medical Association and the American Pharmaceutical Association at the next annual meeting, to form committees of not more than three members from each of the said associations, which committees, if so appointed, may co-operate with the above-named medical officers in the preparation of the said pharmacopœia, forming a board, which shall have power from time to time to add to its number as may in its judgment be necessary, and which shall elect a chairman and a secretary, and adopt such rules as it shall see fit for the expediting and perfecting of the said pharmacopœia, which, when completed, shall be printed under the supervision of the said board; and an edition of not less than five thousand copies shall be printed for use in the several departments of the government of the United States; and copies may be furnished to private persons in accordance with the provisions of section thirty-eight hundred and nine of the Revised Statutes.

Sec. 3. That for the purpose of defraying the necessary expenses of preparing the said pharmacopœia the sum of five thousand dollars is hereby appropriated out of any moneys in the Treasury not otherwise appropriated, and the same shall be disbursed under the regulations to be prescribed by the Secretary of the Treasury.

Sec. 4. That the said pharmacopœia shall be revised once in ten years, upon the plan embodied in this act.

Legal Relations of Attending Physicians to their Hospitals.

One of the staff of the Queen's Jubilee Hospital, London, was dismissed by the managing committee of the Hospital because he accepted an appointment in another hospital in which homœopathic methods are recognized as an optional mode of treatment. The dismissed physician, whose name is Millican, appealed from this action to the court. Mr. Justice Manisty, before whom the action was tried, animadverted strongly in his judgment on the course which the committee of the hospital had adopted. For this course he has since been rebuked by the Court of Appeals. The doctrine of the latter court was thus stated by the presiding judge: "As medical officer, he would have a license to use certain rooms and certain furniture in the hospital. He would have *only a license, and not an interest in the property*. It followed from that, whether the relation between the plaintiff and the defendants was a contractural relationship or not, the relation was a strictly personal relation. Even, therefore, assuming that the defendants committed a wrongful act in putting an end to that personal relationship, the authorities were clear that the plaintiff was not entitled to an injunction. The plaintiff must bring his case within the principles upon which Courts of Equity will give such relief. Assuming, then, that there was a contract here, Courts of Equity never dreamt of enforcing by injunction agreements that were strictly personal in their nature." Lord Justice Fry remarked: "The position of the plaintiff was twofold. He was a subscriber to the hospital, and so a governor; and that position was not interfered with. He was also a medical officer. It was not necessary to consider whether the appointment constituted a contract with him or not. But, if it did, it created a purely personal relationship."—*Lancet*, Jan. 21, 1888.

Can Asses Vomit?

An interesting physiological point, says the *Lancet*, Dec. 31, 1887, is now being discussed in Paris. M. Zola, in his last work, "La Terre," depicts an intoxicated ass, and concludes with an account of the animal in the throes of sickness. M. Sarcey has taken offence at this unpleasant piece of realism, and, in a review of the work, affirmed that the ass was incapable of being sick, and brought forward the evidence of a veterinary surgeon to the effect that the structure of the stomach of an ass renders vomiting impossible. M. Zola writes back, and turns the tables on his adversary by stating that he had read up the principles of equine or asinine physiology before venturing to describe the matter in question, and refers the veterinary surgeon to his studies. In point of fact, M. Zola is perfectly correct. It is commonly, but incorrectly asserted, that the horse and ass cannot vomit. It is true that they vomit rarely and with great difficulty; the reasons being that the stomach is small, that the œsophagus opens into the stomach much nearer the pylorus than in the dog or man; so that the cardiac portion forms a large sac, against which the contents of the stomach are pressed when efforts to vomit are made. The contents of the stomach are, moreover, usually rather dry, and do not remain long in the interior of that viscus; and, finally, the œsophageal aperture is small and highly muscular. The latter point is undoubtedly of importance, since horses, and we presume asses also, vomit readily enough when, by disease or operation, the cardiac sphincter is paralyzed. M. Zola, if not very delicate, at least studies his art.

Good Advice.

Rev. Dr. Dallinger, speaking with the double authority of a minister of religion and a man of science, has been saying a few words of good, sound sense to Yorkshire people about the mockery of prayer to God for the abatement of small-pox, without the diligent use of all human means to this end. There cannot be a case of small-pox in a community without blame attaching either to the patient or to those responsible either as parents or as guardians of the public health. It is averred that men and women, half recovered from the disease, have been going about in Sheffield in public vehicles, or to places of amusements. This is an outrageous breech equally of sanitary law and of scriptural law of consideration for others. Small-pox is a disease from which everyone may be absolutely protected by vaccination and revaccination, so that to have it is almost a crime.—*Lancet*, February 11, 1888.

Artificial Cow's Milk.

Le Concours Médical, January 14, 1888, says that Dr. Ledentu has communicated to the Society of Medicine of Trieste the following mixture, which seems to him to reproduce with sufficient exactness the composition of cow's milk. He has himself employed it with great success forty-four times in fifty-one cases of cholera infantum. The following is the mixture:

White of egg	ʒiv
Oil of sweet almonds	ʒviiiss
Sugar of milk	ʒx
Carbonate of soda	gr.vi
Chloride of sodium	gr.iii
Neutral phosphate of lime	gr.viiss
Water	Oii

Make into an emulsion.

Acute Bright's Disease in Children.

In a paper on this subject read before the New York State Medical Society, on Feb. 8, 1888, Dr. A. Jacobi said that many cases run an insidious course, the temperature being low, and appearing lower than it is, for the incipient œdema lowers the surface temperature, and even the temperature taken in the axilla by the thermometer is deceptive. Œdema and dyspnœa are the first marked symptoms—œdema of the pericardium, lungs, glottis and brain. Increase of blood-pressure causes cerebral symptoms and cardiac trouble. Diarrhœa is also found. Sometimes the symptoms appear very suddenly—such as a sudden loss of sight. The urine contains albumin; although this is occasionally absent, and then the urine is scanty, of low specific gravity, containing very little urea. Casts and epithelia are found.

One of the causes of acute nephritis in the adult is wanting in children, for the arteries are not degenerated. The most frequent cause is the poison circulating in the blood in the acute infectious diseases, especially scarlatina and diphtheria, but it is very rare in typhoid fever, probably because the course of the latter is not so acute and the range of temperature during it is lower. Rheumatism is for the same reason also less frequently a cause, even when endocarditis is present. The author had seen it follow purpura, renal hemorrhage being one of the symptoms. It also complicates croupous pneumonia, and even catarrhal pneumonia and bronchitis. Irritant drugs cause it, and especially chlorate of potash.

Exposure to cold is a very frequent cause, and in these cases common symptoms are hæmaturia, or hæmoglobinuria, which may return with every fresh exposure. As to the prognosis of nephritis in typhoid fever it is sometimes bad, even fatal, but generally the patient recovers entirely. In scarlatina, chronic nephritis may result, or uræmia may set in early and cause death. In diphtheria, on account of the difference in the poison, the lower range of temperature, and the weak heart, hæmaturia is not so common. In some cases of diphtheria copious albuminuria may even be followed by improvement in the general condition.—*Medical Record*, February 11, 1888.

Formulæ for Eczema.

The following formulæ are from the *Zeitschrift für Therapie:*

℞ Olei cadini (*vel* rusci),
Olei olivæ.....āā ʒi
Lanolin. pur.....ʒiss

Or,

℞ Olei rusci,
Zinci oxidi,
Olei olivæ.....āā ʒi
Lanolini pur.....ʒiss
M. Sig.—For dry scaling eczema.

Lanolin is also especially advantageous in the form of inunction in all cases in which there is a dry scaling skin, and can be either used by itself, mixed with oil to bring it to the proper consistence, or in the form of the following ointment:

℞ Acidi boracici.....ʒj
Olei olivæ.....ʒi–ij
Lanolin. pur.....ʒiss

This borated lanolin ointment accomplishes excellent results in the different affections of the lips in children, which so frequently present themselves for medical treatment.

How to Preserve Ligatures.

Prof. S. W. Gross condemns the use of carbolized oil for preserving *catgut ligatures*, as it forms a nidus for germs. Ten per cent. carbolized water does the same thing unless changed every two weeks. He recommends the following way to preserve them: Take the animal ligature, prepare a 1 to 5 aqueous solution of chromic acid:

Acid. chromic.....ʒj
Aquæ.....fʒv
M.

Add one ounce of the above solution to five ounces of glycerine, place the ligatures n this solution, and leave them there for one week; then take them out of this solution and hang them up until they are perfectly dry. Placed in the following solution they will keep until needed:

Alcohol.....parts 15
Glycerin.....parts 1
Acid. carbolic.....10 %
M.

If thrown into a 1–1000 solution of corrosive sublimate a few minutes before using, they will become soft and pliable.—*College and Clinical Record*, February, 1888.

Emulsions with Saccharin.

This new drug seems to be obtaining a stronger foothold in England than in this country. A. W. Gerard, professor of pharmacy in the University College, uses it in emulsions, and prepares the following formulæ:

EMULSION OF COD-LIVER OIL.

To make an elegant preparation, with the odor and taste well masked:

Take of
Cod-liver oil.....4 fl. ozs.
Powdered gum acacia.....1 oz.
Oil of cassia.....4 min.
Oil of almond.....4 min.
Saccharin.....2 grs.
Water to make.....8 fl. ozs.

Mix the oils with the gum and saccharin in a dry mortar, add 2 fluid ounces of water in one volume, stirring till the emulsion is formed; finally, add sufficient water to make 8 fluid ounces.

EMULSION OF CASTOR OIL.

To make an emulsion in which the oil is well disguised:

Take of
Castor oil.....1 fl. oz.
Powdered gum acacia.....3 drs.
Essential oil of almond.....2 min.
Oil of cloves.....1 min.
Saccharin.....1 gr.
Water to make.....4 fl. ozs.

Mix the oils with the gum and saccharin in a dry mortar, add 4 drams of water at once, stirring till the emulsion is formed; dilute to 4 ounces with water.

YOLK OF EGG EMULSION OF COD-LIVER OIL.

Take of
Cod-liver oil.....4 ozs.
Yolk of egg.....2 ozs.
Common salt.....25 grs.
Saccharin.....2 grs.
Oil of cloves.....8 min.
Water to make.....8 fl. ozs.

Rub the oils gradually with the yolk of egg, salt, and saccharin till an emulsion is formed, make up 8 ounces with water and shake well.—*National Druggist*, January, 1887.

Anomalous Features in a Case of Ovariotomy.

At a meeting of the San Francisco County Medical Society, December 27, 1887, Dr. O. O. Burgess reported a case of ovariotomy in a young woman, in which the operation had been rendered very difficult from the peculiar anatomical arrangement of the parts. The two ovaries had coalesced and degenerated so as to form one tumor, from each side of which a tube, which at first sight resembled intestine, but was afterwards found to be Fallopian tube, passed to the uterus, while from the vertex of the tumor a fibrous band passed upwards and gradually disappeared in the peritoneum. The fact that the displacement of the uterus was congenital, its descent having been prevented by the fibrous band, made it very strange that there never had been any disturbance of the menstrual function.

Another interesting part of the history of this case, is the fact that menstruation has been regular since the operation.—*Pacific Med. and Surg. Journal*, February, 1888.

Warning Apparitions.

In an article entitled: "Have ghosts been seen?" in the *Cosmopolitan*, January, 1888, Mr. Richard A. Proctor discusses the scientific status of the stories of apparitions seen at about the time of the death of friends or relatives, and the explanation offered in regard to them.

The coincidence explanation, he says, which disposes fully of even the best-authenticated ghost and goblin stories, fails entirely in the presence of the phenomena we are considering. Professor DeMorgan, a master of logic, long since pointed out its absurdity as thus applied. Among the multitudinous sights and sounds that, under favoring conditions, may be mistaken for apparitions and their utterances, a considerable number is bound to be strongly deceptive (the human mind being what it is), and there cannot but be some that seem to escape all explanation. But the special characteristic of the influences and appearances we are considering here is that they are so unusual as to convince the persons affected that something of a dreadful or most impressive nature has affected a dear friend or relative, and they are almost always, if not invariably, confirmed by the event.

As to the question of fact involved in these stories, he says: "It appears to me that the evidence regarding the communication of impressions from mind to mind over great distances, in such sort that apparitions of distant persons dying or suffering seem to be seen by their friends or relatives, is too strong to be rejected by any conscientious student of facts." He believes that science is no more justified in rejecting this evidence merely because no explanation is available than astronomers would be justified in rejecting the observed fact that bodies influence other bodies from a distance, merely because, as Newton himself admitted, no one can explain how matter can act where it is not. Some communication, he says, there must be between sun and planet, between planet and satellite, and beyond each solar system between sun and sun and between galaxy and galaxy; but no one has yet shown what that communication may be. In like manner, even the most cautious student of science may well believe that there may be some means of communication, under special conditions, between mind and mind at a distance, though no one may be able to explain how such communication is brought about.

For Chapped Hands.

The *American Druggist* recommends the following formula:

White wax	℥xiv
Spermaceti	℥iij
Cocoa butter	℥ix
Castor oil	℥ix
Oil of benne	℥vi
Melt and mix; then add glycerin	℥ij
Perfume as desired.	

This makes quite a nice preparation. Petrolatum is used instead of the oil of benne (sesame oil) by some, and is considered an improvement. Either, however, will do.

Pruritus Vulvæ.

An application which has proved of the greatest possible service in this obstinate and distressing affection is composed of

Cocaini hydrochlor	gr. xv
Aquæ destillat	q.s. ut ft. sol.
Lanolini	℥ss

This is to be applied to the itching parts.

For chronic Pelvic Peritonitis.

Dr. Cheron recommends:

Ammonii chloridi	℥iss
Syrupi aurantii cort	f℥vi

M. Sig.—One to five tablespoonfuls daily in water.

Putrid Diarrhœa.

Bouchard's formula is:

Naphthalini, Sacchari	āā ℥iss
Essentiæ bergamot	gtt. j–ij

Div. in chart. No. xxv. Dose, one powder every hour.

Photographing anatomical Preparations.

A novel and interesting application of photography was made in Philadelphia recently, and consisted of the photographing of anatomical subjects at night, immediately after their dissection. This was the experiment tried at Dr. George McClellan's "Pennsylvania School of Anatomy," on Tenth street, above Walnut. Dr. McClellan complained that the drawings which he had been able to obtain, while the finest of their kind, were idealized too much and did not present the subject as the student finds it. He also said that the tissues change so rapidly when exposed to air that photographs, unless taken immediately after dissection, gave no adequate idea of the objects, and the light in the clinic hall was of such a character that photography by the ordinary methods was out of the question. Mr. Buchanan undertook to overcome the difficulties by doing the work at night, and with the artificial light compound. The camera was focussed by aid of the light from a match, and very rapid plates were used. About 50 grains of the compound were placed on the edge of a small iron shovel and held a little behind but on the level of the lens; and, after the plate-holder slide had been withdrawn and the lens uncapped, a light was applied to the compound. There was a blaze of intensely white light, lasting for about one-tenth of a second, and the exposure was complete. Six plates were used, and in the cases of three or four a screen of tracing muslin was hung between the flash and subject. The plates were developed the next day and proved to be excellent printing negatives, the details being brought out so sharply that the prints are pronounced to be of very considerable scientific value.—*Ledger*, December 30, 1887.

Gargle for Chronic Pharyngitis.

Endler recommends the following solution as a gargle in chronic pharyngitis:

Zinci sulphatis.....gr. xv
Aquæ menth. pip.....f℥vj
M. Sig.—Use as a gargle four times a day.

He says that his own pharyngitis which had existed for three months, was cured after using this solution continuously for eight days; and that his patients obtained the same successful results. In especially sensitive persons a weaker solution may be employed. —*Berliner klin. Wochenschrift.*

—Diarrhœa and cholera morbus are said to be epidemic in Minneapolis, Minn.

NEWS.

—Emile Rousseau, the eminent French chemist, died on February 6. He was 72 years old.

—Small-pox which has been epidemic in San Francisco, has now become scattered throughout the State.

—A new medical journal is announced to appear in Berlin under the title of the *Berliner Clinik*. Prof. Fürbringer and Dr. Hahn are the editors.

—Professor Brunetti, of the University of Padua, Italy, was recently suspended by ministerial decree, on the charge of inciting the students against his own colleagues.

—The Italian troops at the seat of war in Abyssinia are suffering from fever and intestinal affections, due, it is said, to the continued rainfall, succeeded by sudden elevations of temperature. Of the 18,000 men composing the expeditionary force, about 1,000 are in hospital. The death rate, however, is still very low.—*Lancet*, Feb. 11, 1888.

—The *British Med. Journal*, January 28, 1888, states that Mr. Thomas Godart, late Librarian of St. Bartholomew's Hospital, London, died November 5, 1887, at Sydney, New South Wales, whither he had gone on account of ill-health. He assisted Mr. Luther Holden by engraving the lithographs for Holden's *Osteology*. The best specimens of Mr. Godart's skill are his colored pathological drawings.

—The *American Lancet*, February, 1888, says: Of the one thousand physicians in Louisiana, only one hundred and seventy-six are members of the State Medical Society. Only about half the counties have representatives in the State Society. Why is this, when across the river in Texas the profession is organized with wonderful completeness? There is a chance for some missionary work in the profession of Louisiana.

—Rev. Dr. Leonard Bacon is vigorously assailing, and Rev. Dr. O. H. Platt is as valliantly defending, the faith cure, at Waterbury, Conn. Both are doctors of medicine as well as of divinity, but thus far the faithists have been unable to cure Dr. Bacon of his skepticism. In Jersey City, N. J., a butcher, John Elsey, was cured, or thought he was, of a bronchitis by this simple method, and he has erected a chapel in that city as a mark of his gratitude.

—A physician was recently charged before a Berlin court of justice with assault under peculiar circumstances. It seems that a boy four years old was brought before him

for treatment. Some local examination being necessary, the child began to scream and kick so violently that nothing could be done with him. After efforts to soothe him were entirely fruitless, the doctor lost patience and spanked him. The court held that the doctor had slapped the child with the object of doing him good, and dismissed the case.

—The Commissioners of Charities and Corrections of New York recently discussed a suggestion that the bodies of the unclaimed dead should be cremated, instead of buried, as is now done. The commissioners wrote to Corporation Counsel Beekman asking his legal advice as to whether they had authority to make such disposition of those bodies. He has answered that they have not. The Commissioners are required to bury all such bodies in the usual manner, except when they are authorized to give the bodies to medical colleges.

—The *British Med. Journal*, January 28, 1888, reports that on Friday, January, 13, Dr. Eustace, a young practitioner at Alresford, Hants, was summoned at midnight, and found a patient suffering from uterine hemorrhage. This he stopped, but in the morning the patient was almost pulseless and sinking fast. Dr. Eustace, with no one to help him but an old woman, opened a vein in his arm and tried direct transfusion, but lost a quantity of blood. He then allowed over six ounces of blood to drop into a basin, injected it with a syringe, with the result that the patient recovered.

—The Seventh German Congress for Internal Medicine will be held at Wiesbaden from April 9 to April 12, 1888. Herr Leube of Würzburg will preside. The following subjects are to be discussed:

Monday, April 9.—Chronic diseases of the Heart muscle and their Treatment; Oertel of Münich, and Lichtheim of Bern. Tuesday, April 10.—Alcohol as a therapeutic Agent; Binz of Bonn, and Von Jaksch of Graz. Wednesday, April 11.—The Prevention and Treatment of Asiatic Cholera; Cantani of Naples, and August Pfeiffer of Wiesbaden.

The following addresses are already announced: Rumpf (Bonn), Floating Heart; Unverricht (Jena), Experimental Investigations concerning the Mechanism of Respiration; Adamkiewicz (Cracow), Combined Degeneration of the Spinal Cord; Jaworski (Cracow), Experimental Contributions to the Dietetics of Digestive Disturbances; Stiller (Budapest), Therapeutics of Basedow's disease, and the Diagnosis of Tumors of the Kidney.

HUMOR.

FLIMSEY—"I don't know how it is, but the smallest specimens of men invariably get the best wives." Mrs. F. (archly)—"Oh, you flatterer!"—*Boston Transcript.*

A CORRESPONDENT of a New York paper asks: "Can you give a young lady a cure for malaria? She lives upon filled-in ground." "Filled in ground" must be an unsatisfactory diet. She ought to try pork and beans.—*Pittsburg Chronicle.*

A YOUNG PREACHER picked up Bishop Pierce's hat and put it on his own head, and it was exactly a fit. "Why, Bishop," said he, "your head and mine are exactly the same size." "Yes," replied the Bishop, "on the outside."

CHRISTIAN SCIENTIST.—"Have you ever tried the faith cure for your rheumatism?" Patient.—"Yes, I'm trying it now. I've got in my pocket the left hind foot of a graveyard rabbit that was killed in the dark of the moon, and I'm blamed if I don't think it's helping me.—*N. Y. Sun.*

THE CHRISTIAN SCIENTISTS would have us believe that what we call pain is merely imaginary; but hang the imagination that keeps a fellow awake all night when he has a felon on his thumb! And we don't suppose it would it do any more good to poultice the imagination than it would the thumb.—*Norristown Herald.*

SCIENTISTS say that shutting the eyes makes the hearing more acute. This explains why a man can't sneak into the house at midnight and crawl up-stairs as noiselessly as a feather without being heard by his wife, who is asleep. If women were to sleep with their eyes open, married men would have more fun at the lodge when there is a protracted session.—*Norristown Herald.*

"THE FACT IS, doctor, I can't sleep at nights; have a pain in my chest, and my stomach is all wrong." Doctor (feeling his pulse)—"What is your business, sir?" He—"I am a broker and a member of the New York Stock——" Doctor—"Never mind the balance. I understand your case thoroughly. Here take this (slips a dollar into his hand) and go and get something to eat."

THE SICK EDITOR.—Doctor (to professional nurse)—"Well, how is he this morning?" Nurse—"Weaker, doctor. Been very sick all night, and looks like he was comatose." Doctor—"Hows his temperature?" Nurse—"One hundred and two degrees." Doctor—"How's his circulation?" Editor (with

a fearful yell)—"Biggest in New York! Biggest in the universe! Want an affidavit?" —*Burdette.*

When "Aunt Betty" Brooks, of Pike county, Pa., celebrated her one hundredth birthday on the 2d inst., she caught a cold, which caused her death. This shows that the celebration of one's one hundredth birthday is attended with some danger. If "Aunt Betty" had died in her ninetieth year, she would have escaped that fatal cold, but we don't suppose she thought of that.—*Norristown Herald.*

A Compliment to American Skill and Ingenuity.—*Journal de Pharmacie d' Anvers* gives a full account of the Newark artificial egg manufactory of New Jersey. This triumph of American skill has been received with amazement on the Continent of Europe. The author states that the eggs are so nearly perfect in appearance and taste that it is only a matter of time when the domestic fowl will be banished from the barnyard. It is expected, in the near future, that the problems of life will be solved by these eggs, when properly heated, bringing forth well-feathered chicks.

OBITUARY.

MILTON B. MUSSER, M.D.

Dr. Milton B. Musser, a well-known physician of West Philadelphia, died March 2, 1888, in the 42d year of his age. He had had symptoms of heart failure for some months before his death. Dr. Musser came of a family of physicians—his grandfather, great-grandfather and uncle were physicians, and a brother and a number of cousins are now in active practice. He was graduated from Jefferson Medical College in 1868, and at the time of his death was attending Obstetrician to the Philadelphia Hospital, a member of the College of Physicians, of the County Medical Society and of the Obstetrical Society of Philadelphia. He leaves a wife and three children.

L. M. SERVICE, M.D.

L. M. Service, a well-known physician, of Philadelphia, died February 27, 1888, at the age of 68 years. He was born in Washington county, Pennsylvania, and in early life was a school teacher. He was graduated from the Jefferson Medical College in 1848, and from that period until within a short time of his death he had an extensive practice in Philadelphia, Montgomery and Delaware counties. He leaves a widow, three sons and one daughter.

D. ELLIS BYRD, M.D.

Dr. D. E. Byrd died January 25, 1888, at Marvell, Ark., after a brief illness. He was graduated from the Richmond Medical College in 1863, and after serving as surgeon during the late war began practice in Virginia. In 1870 he removed to Marvell.

OTIS F. MANSON, M.D.

Dr. O. F. Manson died in Richmond, Va., February 1, 1888, after a brief illness. He was 65 years old.

Official list of changes in the Stations and Duties of Officers serving in the Medical Department, U. S. Army, from Feb. 19, 1888, to March 3, 1888:

Lieutenant-Colonel Edward P. Vollum, Surgeon, granted leave of absence for four months, with permission to go beyond sea, and to apply for an extension of two months. S. O. 41, A. G. O., Feb. 20, 1888.

Captain E. F. Gardner, Assistant Surgeon, granted leave of absence for one month and twenty-one days, S. O. 41, A. G. O., Feb. 20, 1888.

Appointment:

Paul Shillock, to be Assistant Surgeon, with the rank of First-Lieutenant, Jan. 31, 1888.

Changes in the Medical Corps of the Navy, for the week ending March 3, 1888:

Surgeon T. C. Heyl, orders to the Receiving Ship "St. Louis" revoked.

Surgeon C. H. White, present duty continued to Oct. 1, 1888.

Surgeon T. H. Streets, ordered to the Receiving Ship "St. Louis."

Surgeon M. C. Drennan, ordered to the Receiving Ship "Vermont."

Surgeon G. R. Brush, detached from the Receiving Ship "Vermont" and to the "Pensacola."

Passed Assistant Surgeon Victor C. B. Means, detached from Naval Hospital, New York, and to the "Pensacola."

Medical Inspector A. A. Hochling, detached from the "Pensacola" and wait orders.

Passed Assistant Surgeon G. E. H. Harman, detached from the "Pensacola" and wait orders.

Passed Assistant Surgeon J. M. Edgar, detached from the "Pensacola" and wait orders.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service, for the week ended March 3, 1888:

G. W. Stoner, Surgeon, detailed as chairman of board for physical examination of officers and candidates, Revenue Marine Service, Feb. 28, 1888.

F. M. Urquhart, Passed Assistant Surgeon, detailed as recorder of board for physicial examination of officers and candidates, Revenue Marine Service, Feb. 28, 1888.

P. C. Kalloch, Passed Assistant Surgeon, relieved from duty at Pittsburgh, Pa.; ordered to Marine Hospital, San Francisco, Cal., March 2, 1888.

P. M. Carrington, Passed Assistant Surgeon, relieved from duty at Marine Hospital, San Francisco, Cal.; ordered to assume charge of Service at Pittsburgh, Pa., March 2, 1888.

J. J. Kinyoun, Assistant Surgeon, granted leave of absence for twenty days, Feb. 28, 1888.